

# CONTENTS

VOL. 42, No. 1

JANUARY 1972

The oxygen-transporting system in relation to age. C. T. M. DAVIES	1
The effects of sodium loading and deprivation on plasma renin and plasma and urinary aldosterone in hypertension. J. P. COGLAN, A. E. DOYLE, G. JERUMS and B. A. SCOGGINS	15
Ragweed pollen: morphological changes on incubation with saliva from ragweed-allergic and non-allergic humans. L. W. MAYRON and R. J. LOISELLE	25
The effect of hypoxia on succinate metabolism in man and the isolated perfused dog liver. R. A. ILES, D. BARNETT, L. STRUNIN, J. M. STRUNIN, B. R. SIMPSON and R. D. COHEN	35
Role of the kidney in 'salt and water dependent hypertension' of end-stage renal disease. G. BIANCHI, C. PONTICELLI, U. BARDI, B. REDAELLI, L. CAMPOLO, C. DE PONTI and G. GRAZIANI	47
Effect of ouabain on insulin secretion in man. C. SAXTON, P. A. MAJID, G. CLOUGH and S. H. TAYLOR	57
Effect of arterial CO <sub>2</sub> pressure on the response of cerebral and hind-limb blood flow and metabolism to isoprenaline infusion in the dog. C. XANALATOS and I. M. JAMES	63
The association of a humoral sodium transport inhibitory activity with renal escape from chronic mineralocorticoid administration in the dog. V. M. BUCKALEW, JR and C. D. LANCASTER, JR	69
The proteinases of human gastric adenocarcinomata: their identification, separation and sites of action on the B-chain of oxidized insulin. D. J. ETHERINGTON and W. H. TAYLOR	79
The role of angiotensin II in the control of aldosterone in man. G. W. BOYD, A. R. ADAMSON, MARION ARNOLD, V. H. T. JAMES and W. S. PEART	91
Intestinal ammonia in uraemia: the effect of a urease inhibitor, acetohydroxamic acid. J. D. SWALES, J. D. TANGE and D. J. EVANS	105
SHORT COMMUNICATION	
Parathyroid-hormone concentrations in nutritional rickets. B. I. JOFFE, W. H. L. HACKENG, H. C. SEFTEL and R. G. HARTDEGEN	113
MEDICAL RESEARCH SOCIETY (Meeting held on 22 October 1971)	
Demonstrations	1P
Communications	2P

VOL. 42, No. 2

FEBRUARY 1972

Breathing patterns and regional ventilation distribution in tetraplegic patients and in normal subjects. B. BAKE, A. R. FUGL-MEYER and G. GRIMBY	117
The effects of synthetic human and salmon calcitonins on electrolyte excretion in the rat. C. C. WILLIAMS, E. W. MATTHEWS, JANE M. MOSELEY and I. MACINTYRE	129

Urinary excretion of nitrogen from [ <sup>15</sup> N]valine, [ <sup>15</sup> N]leucine and [ <sup>15</sup> N]isoleucine in malnourished and recovered children. W. W. C. READ, D. S. MCLAREN and MARIE TCHALIAN	139
The antidiuretic action of diazoxide, J. E. F. POHL, H. THURSTON and J. D. SWALES	145
Studies in man with <sup>18</sup> F. D. J. HOSKING and M. J. CHAMBERLAIN	153
Search for evidence of lung chemoreflexes in man: study of respiratory and circulatory effects of phenyldiguanide and lobeline. S. K. JAIN, S. SUBRAMANIAN, D. B. JULKA and A. GUZ	163
Electrolyte changes in patients with subarachnoid haemorrhage. I. M. JAMES	179
The influence of numerous pregnancies and lactations on bone dimensions in South African Bantu and Caucasian mothers. A. R. P. WALKER, BARBARA RICHARDSON and FAITH WALKER	189
The influence of disodium ethane-1-hydroxy-1,1-diphosphonate (EHDP) on the development of experimentally induced urinary stones in rats. D. FRASER, R. G. G. RUSSELL, ORTRUN POHLER, W. G. ROBERTSON and H. FLEISCH	197
Orthostatic changes of haemodynamics, renal function, plasma catecholamines and plasma renin concentration in normal and hypertensive man. M. MOLZAHN, TH. DISSMANN, S. HALIM, F. W. LOHMANN and W. OELKERS	209
Differential effect of noradrenaline and renal nerve stimulation on vascular resistance in the dog kidney and the release of a prostaglandin E-like substance. J. C. MCGIFF, K. CROWSHAW, N. A. TERRAGNO, K. U. MALIK and A. J. LONIGRO	223
<b>SHORT COMMUNICATION</b>	
Calcium shift into bone: a calcitonin-resistant primary action of parathyroid hormone, studied in rats. C. J. ROBINSON, B. RAFFERTY and J. A. PARSONS	235
<b>MEDICAL RESEARCH SOCIETY (Annual General Meeting held on 10 December 1971)</b>	
Demonstrations	7P
Symposium on the Red Cell	8P
Communications	10P

VOL. 42, No. 3

MARCH 1972

Total and nutritional blood flow in the finger. J. D. COFFMAN	243
Role of pulmonary vagal afferent nerve fibres in the development of rapid shallow breathing in lung inflammation. DIANA TRENCHARD, D. GARDNER and A. GUZ	251
Distribution and properties of Na <sup>+</sup> , K <sup>+</sup> -ATPase in human post-mortem kidney and the effects of diuretics. B. R. TULLOCH, K. GIBSON and P. HARRIS	265
Effects of acutely induced changes in arterial pH on pulmonary vascular resistance during normoxia and hypoxia in awake dogs. O. G. THILENIUS and CAROL DERENZO	277
Effect of phosphate supplements on soft-tissue calcification and bone turnover. JENIFER JOWSEY and P. BALASUBRAMANIAM	289
Effect of increased sodium ion on arterial sodium and reactivity. G. S. HARRIS and W. A. PALMER	301
Intracellular buffering in the dog at varying CO <sub>2</sub> tensions. J. L. GAMBLE, JR, P. J. ZUROMSKIS, J. A. BETTICE and R. L. GINSBERG	311

Iron-deficiency anaemia: its effect on transfer factor for the lung (diffusing capacity) and ventilation and cardiac frequency during sub-maximal exercise. J. E. COTES, J. M. DABBS, P. C. ELWOOD, A. M. HALL, A. McDONALD and M. J. SAUNDERS	325
Insulin disappearance after intravenous injection and its effect on blood glucose in diabetic and non-diabetic children and adults. L. STIMMLER, K. MASHITER, G. J. A. I. SNODGRASS B. BOUCHER and M. ABRAMS	337
An evaluation of rebreathing methods for measuring mixed venous $PCO_2$ during exercise. S. GODFREY and ELIANA WOLF	345
Multistage treadmill walking performance and associated cardiorespiratory responses of middle-aged men. W. C. ADAMS, M. M. MCHENRY and E. M. BERNAUER	355
Respiratory function tests in older people. J. S. MILNE and J. WILLIAMSON	371
Clinical studies on inflammation in small diarthrodial joints. Technetium ( $^{99m}Tc$ ) percentage uptakes in various arthritides and studies on the effect of aspirin in rheumatoid arthritis. W. C. DICK, K. E. COLLINS and W. W. BUCHANAN	383

## VOL. 42, No. 4

APRIL 1972

Effects of uraemic serum, urea, creatinine and methylguanidine on glucose metabolism. P. L. BALESTRI, P. RINDI, M. BIAGINI and S. GIOVANNETTI	395
Oral contraceptives and folate metabolism. M. E. M. STEPHENS, I. CRAFT, T. J. PETERS and A. V. HOFFBRAND	405
A comparison of leucocyte potassium content with other measurements in potassium-depleted rabbits. J. PATRICK and BERENICE BRADFORD	415
A role for sodium-retaining steroids in the regulation of proximal tubular sodium reabsorption in man. JOHN R. GILL, JR, CATHERINE S. DELEA and F. C. BARTTER	423
An intrinsic rhythm of urinary calcium excretion and the specific effect of bedrest on the excretory pattern. M. C. MOORE EDE, M. H. FAULKNER and BARBARA E. TREDRE	433
Observations on the measurement and regulation of the sodium content of human erythrocytes. E. K. M. SMITH	447
A new method for assessing states of acute acidaemia in man. J. B. STOKER, C. T. KAPPAGODA, V. A. GRIMSHAW and R. J. LINDEN	455
Experimental vitamin $B_6$ deficiency and the effect of oestrogen-containing oral contraceptives on tryptophan metabolism and vitamin $B_6$ requirements. D. P. ROSE, R. STRONG, P. W. ADAMS and P. E. HARDING	465
Analysis of changes in the renin-angiotensin system during pregnancy. S. L. SKINNER, EUGENIE R. LUMBERS and E. M. SYMONDS	479
The response of blood pressure to infusion of angiotensin II: relation to plasma concentrations of renin and angiotensin II. R. H. CHINN and GISELA DÜSTERDIECK	489
Peripheral airways resistance, static recoil and the forced expiratory volume. RUTH M. CAYTON and P. HOWARD	505
Renal calculi and self-medication with multivitamin preparations containing vitamin D. W. H. TAYLOR	515
MEDICAL RESEARCH SOCIETY (Meeting held on 11 February 1972)	
Demonstrations	15P
Communications	15P

Acknowledgment to referees of papers submitted during 1971	523
Effect of intraluminal concentrations on the impairment of glycine absorption by glucose in the human jejunum. G. C. COOK	525
Renal vasodilatation: studies on the site of action in the nephron. S. G. MASSRY and J. J. AHUMADA	535
Intravascular haemolysis and urinary iron losses after replacement of heart valves by a prosthesis. S. D. SLATER and G. S. FELL	545
Influence of patient age on forearm and systemic vascular response to hypoxaemia. T. F. KRAVEC, G. W. N. EGGERS, JR and L. J. KETTEL	555
Metabolic effect and uptake of [ <sup>3</sup> H]digoxin in the forearm of man. R. I. OGILVIE and G. A. KLASSEN	567
Vascular reactivity in post-deoxycorticosterone hypertension in rats and its relation to 'irreversible' hypertension in man. L. J. BEILIN and G. ZIAKAS	579
Metabolic changes in active chronic hepatitis. K. G. M. M. ALBERTI, C. O. RECORD, D. H. WILLIAMSON and R. WRIGHT	591
Inhibition of sodium and potassium transport in separated renal tubule fragments incubated in extracts of urine obtained from salt-loaded individuals. E. M. CLARKSON and H. E. DE WARDENER	607
Carbon monoxide, tissue hypoxia, and sensory psychomotor response in hypoxaemic subjects. J. M. RAMSAY	619
Distribution of renal blood flow in patients with heart disease. D. C. FLUCK, T. R. EVANS, D. C. SIGGERS, J. CRAWLEY and S. A. SRIVONGSE	627
Mechanisms of excretion of some low-molecular-weight bases in the rat. E. BOURKE, A. M. ASATOOR and M. D. MILNE	635

SHORT COMMUNICATIONS

The effect of defibrination on nephrotoxic serum nephritis in rabbits. P. NAISH, G. B. PENN, D. J. EVANS and D. K. PETERS	643
The measurement of the extracellular space in an <i>in vitro</i> system of human leucocytes. J. PATRICK and P. J. HILTON	647
MEDICAL RESEARCH SOCIETY (Meeting held on 17 March 1972)	
Demonstrations	23P
Symposium on Ion and Water Movements through Living Membranes	23P
Communications	26P

Pathogenesis of arterial hypertension after the constriction of the renal artery leaving the opposite kidney intact both in the anaesthetized and in the conscious dog. G. BIANCHI, E. BALDONI, R. LUCCA and P. BARBIN	651
Excretion of propionylglycine in propionic acidaemia. K. RASMUSSEN, T. ANDO, W. L. NYHAN, D. HULL, D. COTTOM, G. DONNELL, W. WADLINGTON and A. W. KILROY	665

Exchangeable potassium content and distribution in normal subjects and uraemic patients on chronic haemodialysis. V. RETTORI, T. GRAL, S. G. MASSRY and M. F. VILLAMIL	673
Renin and control of arterial blood pressure during terminal renal failure treated by haemodialysis and by transplantation. A. VERNIORY, P. POTVLIERGE, J. J. VAN GEERTRUYDEN, P. VEREERSTRAETEN, P. KINNAERT, M. STAROUKINE and C. TOUSSAINT	685
Water and sodium excretion after blood volume expansion under conditions of constant arterial, venous and plasma oncotic pressures and constant haematocrit. B. LICHARDUS and A. NIZET	701
Studies on the mechanism of sodium excretion in uraemia. R. WILKINSON, J. A. LUETSCHER, A. J. DOWDY, C. GONZALES and G. W. NOKES	711
Reversibility of airways obstruction in chronic bronchitis. T. W. ASTIN	725
A study by perfusion techniques of the absorption abnormalities in the jejunum in adult coeliac disease. R. I. RUSSELL, J. G. ALLAN, V. P. GERSKOWITCH and J. W. K. ROBERTSON	735
The effect of experimental immune complex nephritis on rat serum proteins. C. H. W. HORNE and P. G. TONER	743
Relationship between haemodynamic and respiratory function in patients with myocardial infarction and left ventricular failure. ANNE E. TATTERSFIELD, M. W. MCNICOL and R. W. SILLETT	751
The effect of acute portacaval shunting in dogs on cerebral and peripheral blood flow and metabolism. I. M. JAMES, LINDSAY MACDONELL and C. XANALATOS	769
SHORT COMMUNICATIONS	
Increased adenosine triphosphate concentration in erythrocytes in neurofibromatosis. L. KULLMANN, G. E. J. STAAL and H. W. WOUTERS	775
Elevation of alcohol dehydrogenase activity in the subclinically scorbutic guinea-pig. MAUREEN O'KEANE, M. R. MOORE and A. GOLDBERG	781