

# CONTENTS

VOL. 54, No. 1

JANUARY 1978

Guidance for Authors	i-x
Editorial Review: The Frank-Starling curve. M. I. M. NOBLE	1-7
Ventilatory responses to exercise and to carbon dioxide in mitral stenosis before and after valvulotomy: causes of tachypnoea. J. W. REED, M. ABLETT and J. E. COTES	9-16
Effects of renal dopamine receptor and $\beta$ -adrenoreceptor blockade on rises in blood angiotensin after haemorrhage, renal ischaemia and frusemide diuresis in the dog. C. BELL and W. J. LANG	17-23
Motion of the rib cage and the abdomen in tetraplegic patients. J. P. MORTOLA and G. SANT'AMBROGIO	25-32
Effect of isometric hand-grip exercise on the carotid sinus baroreceptor reflex in man. G. MANCIA, J. IANNOS, G. G. JAMIESON, R. H. LAWRENCE, P. R. SHARMAN and J. LUDBROOK	33-37
The relationship of urinary kallikrein activity to renal salt and water excretion. S. B. LEVY, R. P. FRIGON and R. A. STONE	39-45
Effect of inhibition of prostaglandin synthesis on the natriuresis induced by saline infusion in man. TH. MOUNTOKALAKIS, TH. KARAMBASIS, D. MAYOPOULOU-SYMOULIDOU and G. MERIKAS	47-50
Intracellular free amino acids in muscle tissue of patients with chronic uraemia: effect of peritoneal dialysis and infusion of essential amino acids. J. BERGSTRÖM, P. FÜRST, L.-O. NORÉE and E. VINNARS	51-60
Elimination of porcine secretin in pigs. J. FAHRENKRUG, O. B. SCHAFFALITZKY DE MUCKADELL and J. J. HOLST	61-68
Skeletal blood flow in Paget's disease of bone and its response to calcitonin therapy. R. WOOTTON, J. REEVE, E. SPELLACY and M. TELLEZ-YUDILEVICH	69-74
Angiotensin II blockade before and after marked sodium depletion in patients with hypertension. P. VAN HOOGDALEM, A. J. M. DONKER and F. H. H. LEENEN	75-83
Oxygen transport in children on maintenance haemodialysis. E. BURSAUX, M. BROYER, C. POYART, B. BOHN and G. JEAN	85-91
The measurement of calcium absorption and absorption rate with an external arm radio-activity counter. R. C. SMART and C. D. HOLDSWORTH	93-97
Intensive iron-chelation therapy with desferrioxamine in iron-loading anaemias. M. J. PIPPARD, S. T. CALLENDER and D. J. WEATHERALL	99-106

## SHORT COMMUNICATIONS

The metabolic response to galactose as a measure of hepatic glucose release in man. G. ROYLE, M. G. W. KETTLEWELL, V. ILIC and D. H. WILLIAMSON	107-109
Bone blood flow and age in the rat. J. N. MACPHERSON and P. TOTHILL	111-113
Barter's syndrome: contrasting patterns of prostaglandin excretion in children and adults. F. DRAY	115-118

VOL. 54, No. 2

FEBRUARY 1978

Editorial Review: Central nervous actions of $\beta$ -adrenoreceptor antagonists. J. CONWAY, D. T. GREENWOOD and D. N. MIDDLEMISS	119-124
The relation between plasma androstenedione, plasma oestrone and androstenedione to oestrone conversion rates in post-menopausal women with and without fractures. B. PELC, D. H. MARSHALL, P. GUHA, M. Y. KHAN and B. E. C. NORDIN	125-131

Hepatic metabolism of aminopyrine in patients with chronic renal failure. S. SCHERRER, B. HALDIMANN, A. KÜPFER, F. REUBI and J. BIRCHER	133-140
Influence of indomethacin on the systemic and pulmonary vascular resistance in man. A. WENNMAHM	141-145
Characterization of immunoreactive angiotensin in canine cerebrospinal fluid as Des-Asp <sup>1</sup> -angiotensin II. J. S. HUTCHINSON, J. CSICSMANN, P. I. KORNER and C. I. JOHNSTON	147-151
Hypertension induced by prolonged intracoronary administration of dobutamine in conscious dogs. J.-F. LIARD	153-160
An interpretation of the intravenous glucose tolerance test in the light of recent findings on the kinetics of glucose and insulin in man. V. J. CUNNINGHAM and D. F. HEATH	161-173
Relationships between cardiac output, heart rate and blood volume in essential hypertension. N. P. CHAU, M. E. SAFAR, Y. A. WEISS, G. M. LONDON, A. CH. SIMON and P. L. MILLIEZ	175-180
Effect of cyclo-alkyl lactamimides upon human pepsins and pepsinogens. N. B. ROBERTS and W. H. TAYLOR	181-185
Concurrent estimation of total body and exchangeable body sodium in hypertension. K. BODDY, J. J. BROWN, D. L. DAVIES, A. ELLIOTT, I. HARVEY, J. K. HAYWOOD, I. HOLLOWAY, A. F. LEVER, J. I. S. ROBERTSON and E. D. WILLIAMS	187-191

## SHORT COMMUNICATIONS

Comparative effects of oestrogen and a progestogen on loss in postmenopausal women. R. LINDSAY, D. M. HART, D. PURDIE, M. M. FERGUSON, A. S. CLARK and A. KRASZEWSKI	193-195
Metabolism <i>in vitro</i> of 25-hydroxycholecalciferol in chicks fed on phosphorus-deficient diets. R. SWAMINATHAN, B. A. SOMMERVILLE and A. D. CARE	197-200
Lipolytic activities in post-heparin plasma in man measured with different substrate emulsions. B. VESSBY, J. BOBERG and H. LITHELL	201-203
Subcellular distribution of hydrolase activities for glycine and leucine homopeptides in human jejunum. J. A. NICHOLSON and T. J. PETERS	205-207
MEDICAL RESEARCH SOCIETY (Annual General Meeting on 9 and 10 December 1977) Symposium: Membrane Structure and Function	1P
Communications	1P-37P

VOL. 54, No. 3

MARCH 1978

The role of sodium depletion in hydrochlorothiazide-induced antidiuresis in Brattleboro rats with diabetes insipidus. D. G. SHIRLEY, S. J. WALTER and J. F. LAYCOCK	209-215
Reflex control of renin release in essential hypertension. G. MANCIA, G. LEONETTI, L. TERZOLI and A. ZANCHETTI	217-222
Muscle electrolytes and fluid compartments in six children with Bartter's syndrome. C. DELAPORTE, J. STULZAFI, C. LOIRAT and M. BROYER	223-231
The degradation of human glomerular basement membrane with purified lysosomal proteinases: Evidence for the pathogenic role of the polymorphonuclear leucocyte in glomerulonephritis. M. DAVIES, A. J. BARRETT, J. TRAVIS, E. SANDERS and G. A. COLES	233-240
Effects of ileal and caecal resection on the colon of the rat. J. H. B. SCARPELLO, B. A. CARY and G. E. SLADEN	241-249
Family studies on the activity of uroporphyrinogen I synthase in diagnosis of acute intermittent porphyria. E. G. ASTRUP	251-256
Tidal pressure/volume and flow/volume respiratory loop patterns in human neonates. A. D. MILNER, R. A. SAUNDERS and I. E. HOPKIN	257-264

Uptake by bone of pyrophosphate, diphosphonates and their technetium derivatives. S. BISAZ, A. JUNG and H. FLEISCH	265-272
The metabolism of tartrate in man and the rat. V. S. CHADWICK, A. VINCE, M. KILLINGLEY and O. M. WRONG	273-281
The effect of $\alpha$ -adrenoreceptor stimulation on the airways of normal and asthmatic man. P. D. SNASHALL, F. A. BOOTHER and G. M. STERLING	283-289
Evidence of increased oxalate absorption in patients with calcium-containing renal stones. A. HODGKINSON	291-294
Control of breathing in patients with chronic obstructive lung disease. J. ŠORLI, A. GRASSINO, G. LORANGE and J. MILIC-EMILI	295-304
Renin, blood volume and response to saralasin in patients on chronic haemodialysis: evidence against volume- and renin-'dependent' hypertension. B. P. McGRATH and J. G. G. LEDINGHAM	305-312
The interpretation of different measurements of airways obstruction in the presence of lung volume changes in bronchial asthma. K. B. SAUNDERS and M. RUDOLF	313-321
Metabolic and body temperature changes during exercise in hyperthyroid patients. K. NAZAR, J. CHWALBIŃSKA-MONETA, J. MACHALLA and H. KACIUBA-UŚCIELKO	323-327

## SHORT COMMUNICATIONS

A radioimmunoassay for 1,25-dihydroxycholecalciferol. T. L. CLEMENS, G. N. HENDY, R. F. GRAHAM, E. G. BAGGIOLINI, M. R. USKOKOVIC and J. L. H. O'RIORDAN	329-332
The effect of acute extracellular volume expansion on sodium chloride reabsorption in the diluting segment in man. N. ISH-SHALOM, J. RAPOPORT, C. CHAIMOVITZ and O. S. BETTER	333-336

VOL. 54, Vol. 4

APRIL 1978

Editorial Review: Intestinal transport of salt and water. L. A. TURNBERG	337-348
Parathyroid hormone-like biological activity in urine. N. NUS-DE WOLF, N. DE NUTTE, H. BRAUMAN and J. CORVILAIN	349-353
The occurrence of folate-derived pteridines in rat liver. B. REED, D. WEIR and J. SCOTT	355-360
The mechanism of renomedullary antihypertensive action: haemodynamic studies in hydronephrotic rats with one-kidney renal-clip hypertension. D. SUŠIĆ, J. C. SPARKS, E. A. MACHADO and D. KENTERA	361-367
Lecithin-cholesterol acyltransferase and the lipoprotein abnormalities of obstructive jaundice. J. AGORASTOS, C. FOX, D. S. HARRY and N. McINTYRE	369-379
Excretion of conjugated bilirubin in the isolated perfused rat kidney. J. L. GOLLAN, K. J. C. DALLINGER and B. H. BILLING	381-389
Thyroid function and blood pressure in two new strains of spontaneously hypertensive and normotensive rats. M. VINCENT, H. BORNET, F. BERTHEZENE, J. DUPONT and J. SASSARD	391-395
The causation of splenomegaly in schistosomiasis in mice. A. A. F. MAHMOUD and A. W. WOODRUFF	397-401
Structure-activity relations of the fibrinolytic response to vasopressins in man. J. D. CASH, A. M. A. GADER, J. L. MULDER and J. H. CORT	403-409
Changes in absorptive and peptide hydrolase activities in rat small intestine after administration of 5-fluorouracil. M. L. G. GARDNER, P. R. SAMSON and R. C. HEADING	411-418
Effect of carbamazepine on plasma and urine arginine-vasopressin. T. H. THOMAS, S. G. BALL, J. K. WALES and M. R. LEE	419-424
A new technique for measuring protein turnover in the gut, liver and kidneys of lean and obese mice with [ <sup>3</sup> H]glutamic acid. B. G. MILLER, R. F. GRIMBLE and T. G. TAYLOR	425-430

Effect of streptozotocin-diabetes on the local and general responses to injury in the rat. E. A. ELEBUTE and R. A. LITTLE	431-437
Effect of oophorectomy and calcium deprivation on bone mass in the rat. A. HODGKINSON, J. E. AARON, A. HORSMAN, M. S. F. MCLACHLAN and B. E. C. NORDIN	439-446
<b>SHORT COMMUNICATIONS</b>	
Circadian rhythmicity of delayed hypersensitivity to oxazolone in the rat. R. POWNALL and M. S. KNAPP	447-449
Effect of chenodeoxycholic acid on serum and biliary lipids in patients with hyperlipopro- teinaemia. B. ANGELIN, K. EINARSSON and B. LEIJD	451-455
Effect of antitonin on blood pressure in the one-kidney hypertensive rat. R. GARCIA, R. BOUCHER, J. GUTKOWSKA, K. KONDO, S. DEMASSIEUX and J. GENEST	457-461
 VOL. 54, No. 5	 MAY 1978
Editorial Review: Physiological analysis of skeletal muscle weakness and fatigue. R. H. T. EDWARDS	463-470
Comparison of human myofibrillar protein catabolic rate from 3-methylhistidine excretion and synthetic rate from muscle biopsies during L-[ $\alpha$ - <sup>15</sup> N]lysine infusion. R. O. MCKERAN, D. HALLIDAY and P. PURKISS	471-475
Total body water, total exchangeable sodium and related variables in the Ghanaian. S. K. ADDAE, S. DAKUBU, E. T. LARMIE, R. BOATIN and E. H. BELCHER	477-479
Effects of diuretics on renal glucose transport in the dog. S.-F. WEN, J. W. BOYNAR, JR and R. W. STOLL	481-488
Renal vascular response to haemorrhage in the rabbit after pentobarbitone, chloralose- urethane and ether anaesthesia. D. J. WARREN and J. G. G. LEDINGHAM	489-494
Effect of hyperosmolar stimuli and coeliac disease on the permeability of the human gastrointestinal tract. P. G. WHEELER, I. S. MENZIES and B. CREAMER	495-501
Effects of acute acid-base alterations on glutamine metabolism and renal ammonia- genesis in the dog. A. FINE, F. I. BENNETT and G. A. O. ALLEYNE	503-508
Biochemical and clinical effects of ethane-1-hydroxy-1,1-diphosphonate in calcium nephrolithiasis. J. M. BAUMANN, S. BISAZ, H. FLEISCH and M. WACKER	509-516
Determination of human leg blood flow: a thermodilution technique based on femoral venous bolus injection. L. JORFELDT, A. JUHLIN-DANNFELT, B. PERNOW and R. WASSEN	517-523
Saline-induced natriuresis in the dog without prior exposure of the kidney to the physical effects of expansion of the extracellular fluid compartment. P. J. KLEMMER, C. DE LOS SANTOS and W. B. BLYTHE	525-527
Control of enzymatically inactive renin in man under various pathological conditions: implications for the interpretation of renin measurements in peripheral and renal venous plasma. F. H. M. DERKX, G. J. WENTING, A. J. MAN IN'T VELD, R. P. VERHOEVEN and M. A. D. H. SCHALEKAMP	529-538
An evaluation of bilirubin kinetics with respect to the diagnosis of Gilbert's syndrome. L. OKOLICSANYI, O. GHIDINI, R. ORLANDO, S. CORTELAZZO, G. BENEDETTI, R. NACCARATO and P. MANITTO	539-547
The organelle pathology and demonstration of mitochondrial superoxide dismutase deficiency in two patients with Dubin-Johnson-Sprinz syndrome. T. J. PETERS and C. A. SEYMOUR	549-553
Effect of saralasin and serum in myohaemoglobinuric acute renal failure of rats. K. BAUEREISS, K. G. HOFBAUER, A. KONRADS and F. GROSS	555-560
Renal prostaglandins in renal hypertensive dogs. K. K. DIGHE, G. W. SMITH, A. UNGAR and P. H. WHELPDALE	561-566

- Lack of a role for the renal nerves in renal sodium reabsorption in conscious dogs. M. D. LIFSCHITZ 567-372
- Effects of glucocorticoid deficiency on renal medullary cyclic adenosine monophosphate of rats. K. KUROKAWA, E. AZNAR, C. DESCOEUDRES, A. ZULUETA and S. G. MASSRY 573-577
- Purine metabolism and immunodeficiency: urine purine excretion as a diagnostic screening test in adenosine deaminase and purine nucleoside phosphorylase deficiency. H. A. SIMMONDS, A. SAHOTA, C. F. POTTER and J. S. CAMERON 579-584

## SHORT COMMUNICATION

- Effect of zinc on leucocyte sodium transport *in vitro*. J. PATRICK, J. MICHAEL, M. N. GOLDEN, B. E. GOLDEN and P. J. HILTON 585-587

VOL. 54, No. 6

JUNE 1978

- Editorial Review: The metabolism and clinical relevance of the keto acid analogues of essential amino acids. P. RICHARDS 589-593
- Purine biosynthesis *de novo* by lymphocytes in gout. K. KAMOUN, J. CHANARD, M. BRAMI and J. L. FUNCK-BRENTANO 595-601
- Natriuretic effect of propranolol on dogs with chronic bile-duct ligation. J. WINAVER, C. CHAIMOVITZ and O. S. BETTER 603-607
- Central and peripheral fatigue in sustained maximum voluntary contractions of human quadriceps muscle. B. BIGLAND-RITCHIE, D. A. JONES, G. P. HOSKING and R. H. T. EDWARDS 609-614
- Role of endotoxin in glycerol-induced renal failure in the rat. J. P. NOLAN, R. C. VENUTO and G. S. GOLDMANN 615-620
- Effects of airway anaesthesia on the ability to detect added inspiratory resistive loads. B. A. CHAUDHARY and N. K. BURKI 621-626
- Effect of blood transfusion on the carbon monoxide transfer factor of the lung in man. E. H. CLARK, R. L. WOODS and J. M. B. HUGHES 627-631
- Effect of administration of Sar<sup>1</sup>-Ala<sup>8</sup>-angiotensin II during the development and maintenance of renal hypertension in the rat. M. FERNANDES, R. FIORENTINI, G. ONESTI, G. BELLINI, A. B. GOULD, H. HESSAN, K. E. KIM and C. SWARTZ 633-637
- Effect of arterial pressure and inheritance on the sodium excretory capacity of normal young men. R. C. WIGGINS, I. BASAR and J. D. H. SLATER 639-647
- Renal function in chronic obstructive jaundice: a micropuncture study in rats. M. E. M. ALLISON, N. G. MOSS, M. M. FRASER, J. W. DOBBIE, C. J. RYAN, A. C. KENNEDY and L. H. BLUMGART 649-659
- Factors related to potassium transport in chronic stable renal disease in man. T. KAHN, D. M. KAJI, G. NICOLIS, L. R. KRAKOFF and R. M. STEIN 661-666
- Lysosomal enzymes in human urine: evidence for polymorphonuclear leucocyte proteinase involvement in the pathogenesis of human glomerulonephritis. E. SANDERS, G. A. COLES and M. DAVIES 667-672

## SHORT COMMUNICATIONS

- Induction of lysinuria in the rat by two *para*-substituted guanidinophenylalanines. C. W. I. OWENS 673-677
- The use of the human erythrocyte as a model for studying the action of diuretics on sodium and chloride transport. B. A. BROOKS and A. F. LANT 679-683