

# CONTENTS

Volume 90, part 1

January 1996

---

## Guidance for Authors 1996

### Editorial

### PAPERS

- Increased inward passive permeability *in vitro* to sodium in uraemic erythrocytes  
by D. B. CORRY, C. C. ELLIS and M. L. TUCK 3-8
- Low concentrations of ouabain increase cytosolic free calcium concentration in rat vascular  
smooth muscle cells by Z. ZHU, M. TEPEL, M. NEUSSER and W. ZIDEK 9-12
- Characteristics of the sodium/hydrogen exchange in non-insulin-dependent diabetic patients  
with microalbuminuria and hypertension by K. F. ZAIDI and J. S. YUDKIN 13-19
- Effect of angiotensin-converting enzyme inhibitors on resistance artery structure and  
endothelium-dependent relaxation in two-kidney, one-clip Goldblatt hypertensive and  
sham-operated rats by M. A. BENNETT and H. THURSTON 21-29
- Cardiomegaly and vasoactive hormones in rats with chronic myocardial infarction: long-term  
effects of chlorothiazide by M. KOHZUKI, M. KANAZAWA, K. YOSHIDA, E. TSUTSUMI,  
M. YASUJIMA, K. ABE, C. I. JOHNSTON and T. SATO 31-36
- Expression of endothelin peptides and mRNA in the human heart by C. PLUMPTON,  
M. J. ASHBY, R. E. KUC, G. O'REILLY and A. P. DAVENPORT 37-46
- Ischaemia-reperfusion injury in the rat is modulated by superoxide generation and leads to  
an augmentation of the hypoxic pulmonary vascular response by M. MESSENT,  
M. J. D. GRIFFITHS, G. J. QUINLAN, J. M. C. GUTTERIDGE and T. W. EVANS 47-54
- Seasonal variation in blood pressure in normotensive women studied by home measurements  
by Y. IMAI, M. MUNAKATA, I. TSUJI, T. OHKUBO, H. SATOH, H. YOSHINO, N. WATANABE,  
A. NISHIYAMA, N. ONODERA, J. KATO, M. SEKINO, A. AIHARA, Y. KASAI and K. ABE 55-60
- Effects of intermittent pressure-induced strain on the electrophysiology of cultured human  
chondrocytes: evidence for the presence of stretch-activated membrane ion channels by  
M. WRIGHT, P. JOBANPUTRA, C. BAVINGTON, D. M. SALTER and G. NUKI 61-71
- Bed rest decreases whole-body protein turnover in post-absorptive man by G. E. A. BETTANY,  
B. C. ANG, S. N. GEORGIANNOS, D. HALLIDAY and J. POWELL-TUCK 73-75
- Plasma inhibitory activity against tumour necrosis factor in fulminant hepatic failure  
by H. M. KEANE, N. SHERON, J. GOKA, R. D. HUGHES and R. WILLIAMS 77-80
- Are Himalayan Sherpas better protected against brain damage associated with extreme  
altitude climbs? by E. GARRIDO, R. SEGURA, A. CAPDEVILA, J. PUJOL, C. JAVIERRE and  
J. LI. VENTURA 81-85

---

Volume 90, part 2

February 1996

### RAPID COMMUNICATION

- Epoprostenol increases plasma level of atrial natriuretic peptide in humans by C. B. NIELSEN,  
J. N. BECH and E. B. PEDERSEN 87-89

**PAPERS**

- Unique response of human arteries to endothelin B receptor agonist and antagonist  
by J. J. LIU, J. R. CHEN and B. F. BUXTON 91-96
- Thermoregulation and heart rate variability by L. A. FLEISHER, S. M. FRANK, D. I. SESSLER,  
C. CHENG, T. MATSUKAWA and C. A. VANNIER 97-103
- Effects of dobutamine on the relationship between oxygen consumption and delivery in  
healthy volunteers: comparison with sodium nitroprusside by D. DE BACKER, J. BERRE,  
J. J. MORAINÉ, C. MELOT, J. VANFRAECHEM and J.-L. VINCENT 105-111
- Differences in microvascular fluid permeability between long-duration type I  
(insulin-dependent) diabetic patients with and without significant microangiopathy  
by A. J. JAAP, A. C. SHORE and J. E. TOOKE 113-117
- Length-specific impairment of skeletal muscle contractile function after eccentric muscle  
actions in man by J. M. SAXTON and A. E. DONNELLY 119-125
- Implications of urinary basic fibroblast growth factor excretion in patients with urothelial  
carcinoma by N.-H. CHOW, C.-J. CHANG, T.-M. YEH, S.-H. CHAN, T.-S. TZAI  
and J. S.-N. LIN 127-133
- Effects of depolarizing or non-depolarizing preservation solutions on human endothelial cells  
during cold hypoxia by M. A. HIDALGO, D. J. MANN, B. J. FULLER and C. J. GREEN 135-141

**CORRESPONDENCE**

- Definitions of cardiac/ventricular and vascular/arterial compliance are different by  
E. D. LEHMANN, K. D. HOPKINS and R. G. GOSLING 143-144
- Compliance, a cardiologist's view? Author's reply by W. E. M. KOK, P. SIPKEMA  
and R. J. G. PETERS 144-146

**SUPPLEMENT 34**

- Communications for the Autumn Meeting of the Medical Research Society on 23 and 24  
November 1995 in conjunction with the Science and Medicine Conference at the Royal  
College of Physicians, London 1P-34P

**Volume 90, part 3****March 1996**

- REGIONAL FOCUS SERIES: progress of clinical science in Spain edited by J. Diez** 147-171
- Bridging basic science and clinical research by J. M. MATO 147-148
- Immunology research by M. O. DE LANDÁZURI 148-153
- Clinical neurosciences and Alzheimer's disease by R. CACABELOS 153-156
- Cardiac diseases by F. NAVARRO-LÓPEZ 156-158
- Arterial hypertension and vascular medicine by L. M. RUILOPE 159-160
- Renal diseases by J. EGIDO 161-162
- Hepatology by J. I. HERRERO and J. PRIETO 162-167
- Clinical research at the postgraduate school of haematology 'Farreras-Valenti' by C. ROZMAN  
and E. MONTSERRAT 167-169
- The growth hormone-insulin-like growth factor-1 axis by J. RODRIGUEZ-ARNAO, J. J. DIEZ  
and A. GÓMEZ-PAN 169-171

**EDITORIAL REVIEW**

- Microcirculation in sepsis: experimental methods and pathophysiological observations by  
M. SAIR, C. P. WINLOVE and T. W. EVANS 173-182

**PAPERS**

- Rheological and microvascular parameters in diabetic peripheral neuropathy by M. J. YOUNG,  
J. L. BENNETT, S. A. LIDERTH, A. VEVES, A. J. M. BOULTON and J. T. DOUGLAS 183-187

Effect of hyperglycaemia on arterial pressure, plasma renin activity and renal function in early diabetes <i>by</i> J. A. MILLER, J. S. FLORAS, B. ZINMAN, K. L. SKORECKI and A. G. LOGAN	189–195
Alteration of atrial natriuretic peptide and brain natriuretic peptide gene expression associated with progression and regression of cardiac hypertrophy in renovascular hypertensive rats <i>by</i> H. KAWAKAMI, H. OKAYAMA, M. HAMADA and K. HIWADA	197–204
Renal effects of angiotensin I-receptor blockade and angiotensin convertase inhibition in man <i>by</i> F. SCHMITT, S. NATOV, F. MARTINEZ, B. LACOUR and T. P. HANNEDOUCHE	205–213
Salvage of exogenous urea nitrogen enhances nitrogen balance in normal men consuming marginally inadequate protein diets <i>by</i> T. S. MEAKINS and A. A. JACKSON	215–225
Influence of treatment with beclomethasone, cromoglycate and theophylline on perception of bronchoconstriction in patients with bronchial asthma <i>by</i> C. M. B. HIGGS and G. LASZLO	227–234
Respiratory sinus arrhythmia and central respiratory drive in humans <i>by</i> M. AL-ANI, A. S. FORKINS, J. N. TOWNEND and J. H. COOTE	235–241

## Volume 90, part 4

April 1996

### EDITORIAL REVIEW

Are increased plasma non-esterified fatty acid concentrations a risk marker for coronary heart disease and other chronic diseases? <i>by</i> K. N. FRAYN, C. M. WILLIAMS and P. ARNER	243–253
---	---------

### PAPERS

Antioxidant status and lipid peroxidation in type II diabetes mellitus with and without complications <i>by</i> R. K. SUNDARAM, A. BHASKAR, S. VIJAYALINGAM, M. VISWANATHAN, R. MOHAN and K. R. SHANMUGASUNDARAM	255–260
Effects of hypercholesterolaemia on physiological recruitment of coronary vascular reserve in swine <i>by</i> B. A. BERGELSON, T.-K. YU, and N. A. RUOCCO	261–268
Haemodynamic effects of eating: the role of meal composition <i>by</i> U. HØST, H. KELBAEK, H. RASMUSEN, M. COURT-PAYEN, N. J. CHRISTENSEN, U. PEDERSEN-BJERGAARD and T. LORENZEN	269–276
Excessive gravitational blood pooling caused by impaired venous tone is the predominant non-cardiac mechanism of orthostatic intolerance <i>by</i> D. H. P. STREETEN and T. F. SCULLARD	277–285
Renal denervation prevents sodium retention and hypertension in salt-sensitive rabbits with genetic baroreflex impairment <i>by</i> M. WEINSTOCK, E. GORODETSKY and R. KALMAN	287–293
Investigation by polymerase chain reaction of enteroviral infection in patients with chronic fatigue syndrome <i>by</i> A. McARDLE, F. McARDLE, M. J. JACKSON, S. F. PAGE, I. FAHAL and R. H. T. EDWARDS	295–300
Differential regulation of cyclo-oxygenase-1 and cyclo-oxygenase-2 gene expression by lipopolysaccharide treatment <i>in vivo</i> in the rat <i>by</i> S. F. LIU, R. NEWTON, T. W. EVANS and P. J. BARNES	301–306
$\beta$ -Oxidation in human alcoholic and non-alcoholic hepatic steatosis <i>by</i> S. EATON, A. M. ZAITOUN, C. O. RECORD and K. BARTLETT	307–313
Plasma lathosterol as a screening test for bile acid malabsorption due to ileal resection: correlation with $^{75}\text{SeH}$ CAT test and faecal bile acid excretion <i>by</i> M. A. FÄRKKILÄ, K. J. KAIREMO, M. J. TAAVITSAINEN, T. A. STRANDBERG and T. A. MIETTINEN	315–319

### CORRESPONDENCE

Psycho-neuro-immune-endocrine system, vascular endothelium and heart failure <i>by</i> L. LORENTE, M.-A. ALLER and J. ARIAS	321–322
---	---------

**Volume 90, part 5****May 1996****EDITORIAL REVIEW**

- Getting rid of carbon dioxide during exercise by N. L. JONES and G. J. F. HEIGENHAUSER 323-335

**PAPERS**

- Differential effects of low- and high-intensity lower body negative pressure on noradrenaline and adrenaline kinetics in humans by M.-C. JACOBS, D. S. GOLDSTEIN, J. J. WILLEMSEN, P. SMITS, T. THIEN and J. W. M. LENDERS 337-343
- Autonomic control of skin microvessels: assessment by power spectrum of photoplethysmographic waves by L. BERNARDI, A. RADAELLI, P. L. SOLDA, A. J. S. COATS, M. REEDER, A. CALCIATI, C. S. GARRARD and P. SLEIGHT 345-355
- Role for the endogenous natriuretic peptide system in the control of basal coronary vascular tone in dogs by T. SUPAPORN, P. W. WENNBERG, C.-M. WEI, M. KINOSHITA, Y. MATSUDA and J. C. BURNETT 357-362
- Failure of thrombin inhibition to prevent intracoronary thrombosis in the dog by P. R. BELCHER, A. J. DRAKE-HOLLAND, J. W. HYND and M. I. M. NOBLE 363-368
- Beneficial effects of L-canavanine, a selective inhibitor of inducible nitric oxide synthase, during rodent endotoxaemia by L. LIAUDET, F. FEIHL, A. ROSSELET, M. MARKERT, J.-M. HURNI and C. PERRET 369-377
- Nitric oxide in streptozotocin-induced diabetes mellitus in rats by A. MAREE, G. PEER, A. IAINA, M. BLUM, Y. WOLLMAN, T. CSERNIHOVSKY, D. S. SILVERBERG and S. CABILI 379-384
- Action of endothelin-I on glomerular haemodynamics in the dog: lack of direct effects on glomerular ultrafiltration coefficient by J. HELLER, H. J. KRAMER and V. HORACEK 385-391
- Antiproteinuric effect predicts renal protection by angiotensin-converting enzyme inhibition in rats with established adriamycin nephrosis by F. H. WAPSTRA, H. VAN GOOR, G. NAVIS, P. E. DE JONG and D. DE ZEEUW 393-401
- Enhanced phospholipase A<sub>2</sub> activity in cultured cardiomyocytes from newborn spontaneously hypertensive rat by E. MILLANVOYE-VAN BRUSSEL and M.-A. DEVYNCK 403-407
- Carbohydrate metabolism in insulin resistance: glucose uptake and lactate production by adipose and forearm tissues *in vivo* before and after a mixed meal by S. W. COPPACK, R. M. FISHER, S. M. HUMPHREYS, M. L. CLARK, J. J. POINTON and K. N. FRAYN 409-415
- Chemical characterization and quantification of proteoglycans in human post-burn hypertrophic and mature scars by P. G. SCOTT, C. M. DODD, E. E. TREDGET, A. GHAHARY and F. RAHEMTULLA 417-425
- Luminal epidermal growth factor preserves mucosal mass of small bowel in fasting rats by M. H. ULSHEN and R. H. RAASCH 427-431

**CORRESPONDENCE**

- Multiple definitions of 'compliance' by E. D. LEHMANN, K. D. HOPKINS and R. G. GOSLING 433-434

**Volume 90, part 6****June 1996****EDITORIAL REVIEW**

- Gene targeting and its application to basic hypertension research by A. F. CLARK, M. G. F. SHARP and J. J. MULLINS 435-446

**GLAXO/MRS YOUNG INVESTIGATOR PRIZE**

- New insights into myocardial arrhythmogenesis: distribution of gap-junctional coupling in normal, ischaemic and hypertrophied human hearts by N. S. PETERS 447-452

**RAPID COMMUNICATION**

- Interstitial glycerol concentration in human skeletal muscle and adipose tissue is close to the concentration in blood by J. S. SAMRA, C. L. RAVELL, S. L. GILES, P. ARNER and K. N. FRAYN 453-456

**PAPERS**

- Muscle protein and amino acid turnover in rats *in vivo*: effects of short-term and prolonged starvation by I. DE BLAAUW, N. E. P. DEUTZ and M. F. VON MEYENFELDT 457-466
- Fasting increases the extent of muscle necrosis in the *mdx* mouse by T. R. HELLIWELL, P. A. MACLENNAN, A. MCARDLE, R. H. T. EDWARDS and M. J. JACKSON 467-472
- Central and peripheral haemodynamic responses to high carbohydrate and high fat meals in human cardiac transplant recipients by M. T. KEARNEY, A. J. COWLEY, T. A. STUBBS, A. J. PERRY and I. A. MACDONALD 473-483
- Effects of facial cooling on elderly and young subjects: interactions with breath-holding and lower body negative pressure by K. J. COLLINS, T. A. ABDEL-RAHMAN, J. C. EASTON, P. SACCO, J. ISON and C. J. DORÉ 485-492
- Superficial hand vein responses to  $N^G$ -monomethyl-L-arginine in post-partum and non-pregnant women by G. A. FORD, S. C. ROBSON and Z. A. MAHDY 493-497
- Angiotensin receptors in myometrium and myometrial vessels from uteri of women during the follicular and luteal phases of the menstrual cycle and in late pregnancy by C. BING, I. R. JOHNSON and F. BROUGHTON PIPKIN 499-505
- Use of continuous haemofiltration to assess the rate of lactate metabolism in acute renal failure by D. A. WRIGHT, L. G. FORNI, P. CARR, D. F. TREACHER and P. J. HILTON 507-510
- Endogenous versus exogenous lithium clearance for evaluation of dopamine-induced changes in renal tubular function by N. V. OLSEN, N. FOGH-ANDERSEN, S. STRANDGAARD and P. P. LEYSSAC 511-515
- Effect of probucol, an oral hypocholesterolaemic agent, on acute tobacco smoke inhalation in rats by T. ISHIZAKI, Y. KISHI, F. SASAKI, S. AMESHIMA, T. NAKAI and S. MIYABO 517-523

**AUTHOR INDEX****SUBJECT INDEX**