

CONTENTS

OPENING ADDRESS BY HIS MAJESTY KING CARL XVI GUSTAF OF SWEDEN	1s
Address by the Rector of Göteborg University: PROFESSOR GEORGE LUNDGREN	2s
Opening address of the President of the International Society of Hypertension. ALBERT ZANCHETTI	3s
Welcoming address. DR LENNART HANSSON	4s
Address on the occasion of the presentation of the Astra Award for the Clinical Pharmacology and Therapeutics of Hypertension to DR BRIAN N. C. PRICHARD and the Smith Kline and French Award for a Young Investigator in Hypertension to DR SUZANNE OPARIL. ALBERTO ZANCHETTI	5s
I. Blood vessels and heart	
An 8 months' longitudinal study of changes in elastic and muscular arteries and veins of the rabbit with sustained hypertension after abdominal aorta constriction. R. D. BEVAN, P. EGGENA, W. R. HUME, L. T. LAIS, E. VAN MARTHENS and J. A. BEVAN	7s
Effect of 1 year's therapy in essential hypertension on systemic haemodynamics studied before and after 'total' autonomic blockade. G. L. JENNINGS, P. I. KORNER and M. D. ESLER	11s
Haemodynamic alterations after reversal of renal hypertension in rats. MARGARETA HALLBÄCK-NORLANDER, E. NORESSON and Y. LUNDGREN	15s
Cardiovascular design after 'reversal' of long-standing renal hypertension in rats. Y. LUNDGREN and LILIAN WEISS	19s
Constriction-distension relationship of resistance vessels in normo- and hyper-tension. B. FOLKOW	23s
The ratio between thickness of media and internal radius in cerebral, mesenteric and renal arterial vessels in spontaneously hypertensive rats. C. NORDBORG and B. B. JOHANSSON	27s
Sensitivity to noradrenaline in isolated tail arteries from spontaneously hypertensive rats. R. C. WEBB and P. M. VANHOUTTE	31s
Biochemical alterations of connective tissue metabolism in the arterial walls of stroke-prone spontaneously hypertensive rats. A. OOSHIMA, Y. YAMORI, K. OHTA, Y. NARA and R. HORIE	35s
Protein synthesis and composition of cardiac and vascular tissue in spontaneously hypertensive rats and the effects of β -adrenergic antagonist treatment. S.-L. BOSTROM and J. FRYLUND	39s
Effect of age on noradrenaline sensitivity of mesenteric resistance vessels in spontaneously hypertensive and Wistar-Kyoto rats. M. J. MULVANY, C. AALKJAER and J. CHRISTENSEN	43s
Pressor responsiveness to angiotensin in renovascular and steroid hypertension. E. S. MARKS, H. THURSTON, R. F. BING and J. D. SWALES	47s
Vascular reactivity in the pathogenesis of spontaneous hypertension. KATHLEEN H. BERECEK, W. RASCHER and F. GROSS	51s

Anatomical accuracy of echocardiographically assessed left ventricular wall thickness. H. LARKIN, D. C. JOHNSON, S. N. HUNYOR, P. CASPARI and R. KAPLAN	55s
ROUND TABLE 1: Cardiac output and volume in hypertension	
The significance of volume and cardiac output in the pathogenesis of hypertension. F. GROSS and R. DIETZ	59s
Relationship between exchangeable sodium and blood pressure in different forms of hypertension in man. D. L. DAVIES, K. McELROY, A. B. ATKINSON, J. J. BROWN, A. M. M. CUMMING, R. FRASER, B. L. LECKIE, A. F. LEVER, A. MACKAY, J. J. MORTON and J. I. S. ROBERTSON	69s
Role of cardiac output, volume and resistance factors in the pathogenesis of hypertension. P. I. KORNER	77s
Volume and cardiac output increases in primary hypertension: contrasting situations in two hypertensive rat strains with different genetic predisposition. B. FOLKOW	83s
II. Renin-angiotensin system	
Activators of inactive renin ('prorenin') in human plasma: their connection with kinin formation, coagulation and fibrinolysis. F. H. M. DERKX, B. N. BOUMA, H. L. TAN-TJONG and M. A. D. H. SCHALEKAMP	89s
Isolation of a renal thiol protease that activates inactive plasma renin. EVE E. SLATER, ANNE D. GOUNARIS and E. HABER	93s
Plasmin can activate plasma prorenin but it is not required for the alkaline phase of acid activation. JEAN E. SEALEY, S. A. ATLAS, J. H. LARAGH, M. SILVERBERG and A. P. KAPLAN	97s
Release of active and inactive renin by the human kidney. W. AOI, S. SETO, Y. DOI, M. MURAYAMA, S. TASAKI, S. SUZUKI, M. KURAMOCHI and K. HASHIBA	101s
Direct radioimmunoassay and immunocytochemical localization of renin in human kidneys. J. MÉNARD, P. W. N'GOC, J. BARIETY, P. T. GUYENNE and P. CORVOL	105s
Renin precursor synthesis and renin-binding proteins in the mouse. K. POULSEN	109s
Effect of age on angiotensin II receptors from rat brain. CLAIRE BAXTER, J. HORVATH, G. DUGGIN and D. TILLER	111s
Acute and chronic effects of nifedipine on plasma renin activity and plasma adrenaline and noradrenaline in controls and hypertensive patients. L. COREA, N. MIELE, M. BENTIVOGLIO, E. BOSCHETTI, E. AGABITI-ROSEI and G. MUIESAN	115s
Haemodynamic profile of angiotensin II antagonism in essential hypertensive patients. S. N. HUNYOR, H. LARKIN and JANET ROWE	119s
Angiotensin II blockade during combined thiazide- β -adrenoreceptor-blocker treatment. H. IBSEN, A. LETH, A. McNAIR and J. GIESE	123s
Contribution of the kidneys but not adrenal glands to the acute antihypertensive effects of captopril in spontaneously hypertensive rats. M. J. ANTONACCIO, J. P. HIGH, B. RUBIN and T. SCHAEFFER	127s
Humoral effects of the oral converting-enzyme inhibitor SQ 14 225 in hypertensive patients. F. FAGARD, A. AMERY, P. LUNEN and T. REYBROUCK	131s
Hormonal changes with long-term converting-enzyme inhibition by captopril in essential hypertension. P. G. MATTHEWS, B. P. McGRATH and C. I. JOHNSTON	135s

Captopril in hypertension with renal artery stenosis and in intractable hypertension; acute and chronic changes in circulating concentrations of renin, angiotensins I and II and aldosterone, and in body composition. A. B. ATKINSON, J. J. BROWN, R. FRASER, B. LECKIE, A. F. LEVER, J. J. MORTON and J. I. S. ROBERTSON	139s
Does the renin-angiotensin system maintain blood pressure in both hypertensive and normotensive subjects? A comparison of propranolol, saralasin and captopril. G. A. MACGREGOR, N. D. MARKANDU and J. E. ROULSTON	145s
Humoral effects of the oral converting-enzyme inhibitor SQ 14 225 in hypertensive patients in supine and tilted position. A. MARGANTI, T. G. PICKERING, J. LOPEZ-OVEJERO and J. H. LARAGH	149s
Effects of an angiotensin converting-enzyme inhibitor on psychosocial hypertension in mice. J. P. HENRY, A. J. VANDER and P. M. STEPHENS	153s
A novel orally active converting-enzyme inhibitor YS 980: effects on blood pressure in spontaneously hypertensive rats. TH. UNGER, R. W. ROCKHOLD, K. SCHAZ, P. VESCEI, G. BÖNNER, W. RASCHER and D. GANTEN	157s
α -Adrenergic suppression of renin secretion in the rat independent of renal vasoconstriction. R. VANDONGEN, K. D. STRANG, MARIANNE H. POESSE and W. H. BIRKENHÄGER	161s
III. Sympathetic nervous system and catecholamines	
Plasma catecholamines and blood pressure responses to the carotid baroreceptor reflex in essential hypertension. G. MANCIA, G. LEONETTI, G. B. PICOTTI, A. FERRARI, M. D. GALVA, L. GREGORINI, G. PARATI, G. POMIDOSI, C. RAVAZZANI, C. SALA and A. ZANCHETTI	165s
Baroreflex control of blood pressure and plasma noradrenaline during exercise in essential hypertension. P. SLEIGHT, J. S. FLORAS, M. O. HASSAN, J. V. JONES, B. A. OSIKOWSKA, P. SEVER and K. L. TURNER	169s
Increased plasma and urinary normetanephrine in young patients with primary hypertension. K. KOBAYASHI, R. KOLLOCH, V. DEQUATTRO and L. MIANO	173s
Plasma noradrenaline correlates with α -adrenoreceptor-mediated vasoconstriction and blood pressure in patients with essential hypertension. W. KIOWSKI, P. VAN BRUMMELEN and F. R. BÜHLER	177s
Plasma noradrenaline concentration in hypertensive and normotensive 40-year-old individuals: relationship to plasma renin concentration. H. IBSEN, N. J. CHRISTENSEN, H. HOLLNAGEL, A. LETH, A. M. KAPPELGAARD and J. GIESE	181s
Effect of the α -adrenoreceptor agonist LD 3098 (cirazoline) on the magnitude of end-organ responses by nerve stimulation and exogenous noradrenaline in a variety of sympathetically innervated animal tissues. R. MASSINGHAM, MARGARITA L. DUBOCOVICH and S. Z. LANGER	185s
Sympatho-adrenal and cardiovascular response to mental stress and orthostatic provocation in latent hypertension. P. HJEMDAHL and K. ELIASSON	189s
Catecholamines and haemodynamics in fixed essential hypertension. E. AGABITI-ROSEI, C. ALICANDRI, R. FARIELLO and G. MUIESAN	193s
Recordings of renal and splanchnic sympathetic nervous activity in normotensive and spontaneously hypertensive rats. P. THORÉN and S.-E. RICKSTEN	197s

Effect of neonatal sympathectomy by 6-hydroxydopamine on volume and resistance regulation in stroke-prone spontaneously hypertensive rats. A. SCHÖMIG, R. DIETZ, W. RASCHER, H. EBSER, U. VOSS and F. GROSS	201s
Absence of sympathetic cholinergic vasodilatation in cats during early stages of effective behaviour elicited by stimulation of central and amygdala, postero-lateral hypothalamus and locus coeruleus. G. STOCK, H. STUMPF and K. H. SCHLÖR	205s
A sympathetic pressor reflex in the conscious dog. M. PAGANI, M. BERGAMASCHI and A. MALLIANI	209s
Noradrenaline clearance in hypertensive patients with various degrees of renal function. Y. MASUYAMA, T. NISHIMURA, I. NISHIO and M. KUCHII	213s
Is blood pressure variability related to activity of the sympathetic system? D. L. CLEMENT, M. M. MUSSCHE, G. VANHOUTTE and R. PANNIER	217s
Effect of baroreceptor deafferentation on central catecholamines in the rat. MARGARET A. PETTY, J. P. CHALMERS, M. BROWN and J. L. REID	221s
Uptake and efflux of noradrenaline from platelets; a model system for neurogenic mechanisms in essential hypertension. I. MATTIASSON, B. MATTIASSON and B. HOOD	225s
The effect of mental stress on catecholamines, their metabolites and plasma renin activity in patients with essential hypertension and in healthy subjects. W. JANUSZEWICZ, M. SZNAJDERMAN, B. WOCIAL, T. FELTYNOWSKI and T. KLONOWICZ	229s
Enhanced release of noradrenaline in the kidney of the young spontaneously hypertensive rat. M. G. COLLIS, C. DE MEY and P. M. VANHOUTTE	233s
Modulation of sympathetic vascular tone by prostaglandins in corticosterone-induced hypertension in rats. W. RASCHER, R. DIETZ, A. SCHÖMIG, G. BURKART, J. B. LÜTH, J. F. E. MANN and J. WEBER	235s
 IV. Prostaglandins and kallikrein-kinin system	
Origin of kallikrein in rat and human exocrine glands and kidney. T. B. ØRSTAVIK, K. NUSTAD and P. BRANDTZAEG	239s
Inhibition of urinary kallikrein excretion by semi-purified renin in the rat. H. R. CROXATTO, G. SILVA and M. BORIC	243s
Urinary kallikrein in normotensive subjects and in patients with essential hypertension. H. ZSCHIEDRICH, P. FLECKENSTEIN, R. GEIGER, E. FINK, K. SINTERHAUF, TH. PHILIPP, A. DISTLER and H. P. WOLFF	247s
Effects of high salt intake and meclofenamate on arterial pressure and renal function in the spontaneously hypertensive rat. S. G. CHRYSANT	251s
The kallikrein-kinin system in blood pressure homeostasis. T. C. LEE, T. KUSHIRO, J.-P. GASSIA, J.-P. GIROLAMI, A. N. LUPU and M. H. MAXWELL	255s
Urinary prostaglandins and kallikrein in essential hypertension. P. C. WEBER, B. SCHERER, E. HELD, W. SIESS and H. STOFFEL	259s
Low urinary kallikrein excretion and elevated blood pressure normalized by orally applied kallikrein in essential hypertension. A. OVERLACK, K. O. STUMPE, C. RESSEL and F. KRÜCK	263s
Sodium balance, urinary prostaglandin I ₂ and renin in normal man. I. NIELSEN, J. ELMGREEN, P. CHRISTENSEN and B. HESSE	267s

Blood pressure effects of endogenous brain angiotensin in rats are increased by inhibition of prostaglandin biosynthesis. B. SCHÖLKENS, R. STEINBACH and D. GANTEN	271s
The effect of mental stress on prostaglandin $F_{2\alpha}$ in patients with essential hypertension and in healthy subjects. H. IGNATOWSKA-ŚWITALSKA, T. KLONOWICZ and T. FELTYNOWSKI	275s
V. Studies in clinical hypertension	
Familial resemblance in casual blood pressure—a maternal effect? B. BENGTSSON, T. THULIN and B. SCHERSTEN	279s
Factors determining the variability of arterial pressure in hypertension. R. D. S. WATSON, T. J. STALLARD and W. A. LITTLER	283s
Autoantibodies in untreated and treated essential hypertension: relationship to histocompatibility leucocyte antigen-B15 and vascular complications. B. Ø. KRISTENSEN	287s
Physical activity and the circadian rhythm of blood pressure. S. MANN, M. W. MILLAR CRAIG, D. I. MELVILLE, V. BALASUBRAMANIAN and E. B. RAFTERY	291s
Factors influencing blood pressure in chronic alcoholics. J. B. SAUNDERS, D. G. BEEVERS and A. PATON	295s
Sodium excretion and blood pressure in essential hypertensive patients during the early phase of hospital admission. P. W. DE LEEUW, A. WESTER, G. A. W. VAN SOEST, J. E. M. VAARTIES-STEEMAN and W. H. BIRKENHÄGER	299s
Studies on the mechanism of mineralocorticoid-induced blood pressure increase in man. A. DISTLER, T. PHILIPP, B. LÜTH and G. WUCHERER	303s
Adrenocorticotropin inhibition of mineralocorticoid hormone production. E. G. BIGLIERI, B. CHANG, J. HIRAI, N. BRUST, C. R. ROST and M. SCHAMBELAN	307s
Reactive hyper-reninaemia to angiotensin blockade identifies renovascular hypertension. D. B. CASE, S. A. ATLAS and J. H. LARAGH	313s
Effect of isometric exercise on the renal excretion of sodium and potassium in mild hypertension. P. S. PARFREY, P. WRIGHT and J. M. LEDINGHAM	317s
Abnormal whole-body and cellular (erythrocytes) turnover of $^{22}\text{Na}^+$ in normotensive relatives of probands with established essential hypertension. N. C. HENNINGSEN, S. MATTSSON, B. NOSSLIN, D. NELSON and O. OHLSSON	321s
Intralymphocytic sodium in hypertensive patients: a significant correlation. E. AMBROSIONI, F. TARTAGNI, L. MONTEBUGNOLI and B. MAGNANI	325s
Clinical and pathological relevance of erythrocyte cation fluxes measurement in hypertension. R. P. GARAY, M. DE MENDONCA, J. L. ELGHOZI, M. A. DEVYNCK, G. DAGHER, M. G. PERNOLLETT, M. L. GRICHOIS, D. BEN-ISHAY and P. MEYER	329s
VI. Studies in experimental hypertension	
Haemodynamics of ACTH-induced hypertension in sheep. B. A. SCOGGINS, K. J. F. ALLEN, J. P. COGHLAN, D. A. DENTON, W. F. GRAHAM, T. J. HUMPHERY and JUDITH A. WHITWORTH	333s
Circulatory changes during pregnancy in spontaneously and renal hypertensive rats. Y. LUNDGREN, K. KARLSSON and U. LJUNGBLAD	337s
Lower body negative pressure: a method to differentiate vasodilators in the intact rat. J. E. DE METZ and P. A. VAN ZWIETEN	341s

A circulating humoral pressor agent in Dahl S rats with salt hypertension. L. TOBIAN, MARY PUMPER, SUSAN JOHNSON and J. IWAI	345s
VII. Therapy	
Treatment of hypertension: State of the art in 1979. E. D. FREIS	349s
Treatment of mild hypertension in elderly males. T. MORGAN, W. ADAM, S. CARNEY, R. GIBBARD, S. BROWN and D. WHEELER	355s
Haemodynamics during long-term thiazide treatment in essential hypertension: differences between responders and non-responders. P. VAN BRUMMELEN, A. MAN IN'T VELD and M. A. D. H. SCHALEKAMP	359s
Mechanism of the haemodynamic interaction between atenolol, a cardioselective β -adrenoreceptor-blocking agent, and chlorthalidone in hypertensive patients. M. VELASCO, J. GUEVARA, J. MORILLO, ANA RAMÍREZ, A. URBINA-QUINTANA and O. HERNANDEZ-PIRETTI	363s
An evaluation of tienilic acid, a new diuretic uricosuric agent, in the therapy of arterial hypertension. A. LECHI, G. COVI, G. DANTI, A. DALLA RIVA, E. PEDROLI and S. POMARI	367s
Response of arterial blood pressure, plasma renin activity and plasma aldosterone concentration to long-term administration of captopril in patients with severe, treatment-resistant malignant hypertension. CONNIE S. MCCAA, H. G. LANGFORD, W. C. CUSHMAN and R. E. MCCAA	371s
The effects of metoprolol on ambulatory blood pressure. S. MANN, M. W. MILLAR CRAIG, D. ALTMAN, D. I. MELVILLE and E. B. RAFTERY	375s
One year follow-up of hyperuricaemic hypertensive patients treated with tienilic acid or a diuretic with or without uric acid-lowering drugs. H. J. WAAL-MANNING and F. O. SIMPSON	379s
Responsiveness to prazosin in renal failure. G. S. STOKES, J. C. MONAGHAN, G. W. FROST and E. P. MACCARTHY	383s
Assessment of the antihypertensive effect of atenolol with 24 h ambulatory monitoring of blood pressure. J. S. FLORAS, P. FOX, M. O. HASSAN, J. V. JONES, P. SLEIGHT and K. L. TURNER	387s
Effect of exercise in hypertension controlled with metoprolol or methyldopa. J. B. STOKER, N. SREEHARAN, R. J. LINDEN, M. P. BARBOUR, A. R. LORIMER, W. S. HILLIS and T. D. V. LAWRIE	391s
Comparative β -adrenoreceptor-blocking effects and pharmacokinetics of propranolol and pindolol in hypertensive Africans. L. A. SALAKO, A. O. FALASE and A. FADEKE ADEROUNMU	393s
Influence of selective and non-selective β -adrenoreceptor blockade on the haemodynamic effect of adrenaline during combined antihypertensive drug therapy. H. HOUBEN, TH. THIEN, TH. DE BOO, W. LEMMENS, C. L. A. VAN HERWAARDEN, J. F. M. FENNIS and A. VAN 'T LAAR	397s
Effect of increasing doses of labetalol on blood pressure, plasma renin activity and aldosterone in hypertensive patients. A. SALVETTI, R. PEDRINELLI, P. SASSANO and F. ARZILLI	401s
Long-term effect of sotalol on plasma lipids. A. LEHTONEN and J. VIKARI	405s

Observations on some properties of a long-acting preparation of propranolol. R. G. SHANKS, J. D. NEILL, W. J. LEAHEY and M. P. S. VARMA	409s
Objective measurement of performance during acute stress in patients with essential hypertension: assessment of the effects of propranolol and metoprolol. F. G. DUNN, A. R. LORIMER and T. D. V. LAWRIE	413s
The pathogenesis of propranolol-withdrawal syndrome in essential hypertension. B. Ø. KRISTENSEN, EVA STEINESS and J. WEEKE	417s
Effect of captopril on renal vascular tone in patients with essential hypertension. A. MIMRAN, H. R. BRUNNER, G. A. TURINI, B. WAEBER and D. BRUNNER	421s
Antihypertensive effects of clonidine in tetraplegic subjects devoid of central sympathetic control. C. J. MATHIAS, J. L. REID, L. M. H. WING, H. L. FRANKEL and N. J. CHRISTENSEN	425s
Action of clonidine on centrally evoked salivation in anaesthetized cats. G. J. GREEN, H. WILSON and A. M. BRECKENRIDGE	429s
SK & F 92657, a novel antihypertensive acting by precapillary vasodilatation and β -adrenoreceptor blockade. E. M. TAYLOR, A. M. ROE and R. A. SLATER	433s
Systemic haemodynamic effects of biofeedback in borderline hypertension. F. H. MESSERLI, J. G. R. DECARVALHO, BARBARA CHRISTIE and E. D. FROHLICH	437s
Intraluminal dilatation of renal artery stenosis. G. G. GEYSKES, C. B. A. J. PUYLAERT, H. Y. OEI and J. H. B. BOOMSMA	441s
Renovascular hypertension: comparison of medical and surgical therapy. P. K. WHELTON, A. P. HARRIS, R. P. RUSSELL, P. C. WALSH, G. M. WILLIAMS, D. P. HARRINGTON and W. G. WALKER	445s
Initial results of the Australian Therapeutic Trial in mild hypertension. REPORT BY THE MANAGEMENT COMMITTEE	449s
 <i>ROUND TABLE 2: Salt intake and the pathogenesis and treatment of hypertension</i>	
Introduction. J. I. S. ROBERTSON	453s
Salt and hypertension. L. WILHELMSEN	455s
The evidence that salt is an important aetiological agent, if not the cause, of hypertension. T. MORGAN, J. MYERS and S. CARNEY	459s
Salt and hypertension: a sceptical review of the evidence. F. O. SIMPSON	463s
 VII. End of Meeting	
Address on the occasion of the Official Dinner at the Sixth Meeting of the International Society of Hypertension by the President	481s
Concluding remarks. ALBERTO ZANCHETTI	482s
Author Index	485s

The Council of the International Society of Hypertension wishes to thank Professor John Swales for acting as Supervisory Editor of these Proceedings, and the following for their invaluable editorial work:

Dr James Conway
Dr Frank Goodwin
Dr Robert Fraser
Professor John Reid
Dr Ian Robertson
Dr Maarten Schalekamp

Owing to the special nature of this Supplement to *Clinical Science* the use of S.I. units has not been adhered to throughout its contents.