

colloquia

664th Meeting, University of Reading

colloquium: Pre- and Post-Partum Nutrition and Metabolism

Prologue: placental–fetal metabolic inter-relationships	W. W. HAY, JR.	67
An overview of early post-partum nutrition and metabolism	J. GIRARD AND J.-P. PÉGORIER	69
Nutrient and metabolic needs of the fetus and very small infant: a comparative approach	W. W. HAY, JR.	75
Fuel selection: the maternal adaptation to fetal nutrient demand	M. C. SUGDEN AND M. J. HOLNESS	79
Mechanisms of maternofetal exchange across the human placenta	C. P. SIBLEY, T. J. BIRDSEY, P. BROWNBILL, L. H. CLARSON, I. DOUGHTY, J. D. GLAZIER, S. L. GREENWOOD, J. HUGHES, T. JANSSON, P. MYLONA, D. M. NELSON AND T. POWELL	86
Maternal nutrition and disproportionate placental-to-fetal growth	M. E. SYMONDS, L. HEASMAN, L. CLARKE, K. FIRTH AND T. STEPHENSON	91
Long-chain polyunsaturated fatty acids: who needs them?	M. HAMOSH	96
Milk: integrative signalling between mother and offspring	M. PEAKER	103
Environmental contaminants in milk: the problem of organochlorine xenobiotics	P. D. DARBRE	106
Role of long-chain fatty acids in the postnatal induction of genes coding for liver mitochondrial β-oxidative enzymes	J.-P. PÉGORIER, F. CHATELAIN, S. THUMELIN AND J. GIRARD	113
Neonatal brown adipose tissue, UCP1 and the novel uncoupling proteins	D. RICQUIER	120
Neonatal metabolic adaptation after preterm delivery or intra-uterine growth retardation	J. M. HAWDON	123
Impaired neonatal hepatic ketogenesis	P. A. QUANT, C. V. LASCELLES, K. J. NEW, K. K. PATIL, N. AZZOUZI, S. EATON AND K. R. F. ELLIOTT	125
Total parenteral nutrition in surgical infants	A. PIERRO, M. O. JONES AND S. C. DONNELL	131
Inborn errors of ketogenesis	G. A. MITCHELL, S. P. WANG, L. ASHMARINA, M.-F. ROBERT, G. BOUCHARD, N. LAURIN, S. KASSOVSKA-BRATINOVA AND Y. BOUKAFTANE	136
Inborn errors of metabolism in the light of metabolic control analysis	J.-P. MAZAT, T. LETELLIER, M. MALGAT, R. ROSSIGNOL, B. KORZENIEWSKI, F. DEMAUGRE AND J.-P. LEROUX	141
Recent developments in the detection of inherited disorders of mitochondrial β-oxidation	K. BARTLETT AND M. POURFARZAM	145

colloquium: Enzymology of Cell-Wall Degradation

Glycosidase families	B. HENRISSAT	153
Mechanisms of cellulases and xylanases	C. BIRSAN, P. JOHNSON, M. JOSHI, A. MACLEOD, L. MCINTOSH, V. MONEM, M. NITZ, D. R. ROSE, D. TULL, W. W. WAKARCHUCK, Q. WANG, R. A. J. WARREN, A. WHITE AND S. G. WITHERS	156
The cellobiohydrolases of <i>Trichoderma reesei</i>: a review of indirect and direct evidence that their function is not just glycosidic bond hydrolysis	M. L. SINNOTT	160
Kinetics of fungal cellulases	M. SCHÜLEIN	164
Structural studies on cellulases	G. J. DAVIES	167
<i>Trichoderma reesei</i> cellobiohydrolases: why so efficient on crystalline cellulose?	T. T. TEERI, A. KOIVULA, M. LINDER, G. WOHLFAHRT, C. DIVNE AND T. A. JONES	173
The cellulosome of <i>Clostridium thermocellum</i>	P. BÉGUIN AND P. M. ALZARI	178
Structure and function analysis of <i>Pseudomonas</i> plant cell wall hydrolases	G. P. HAZLEWOOD AND H. J. GILBERT	185
Superfamilies: the 4/7 superfamily of $\beta\alpha$-barrel glycosidases and the right-handed parallel β-helix superfamily	R. PICKERSGILL, G. HARRIS, L. LO LEGGIO, O. MAYANS AND J. JENKINS	190
Structure, function and protein engineering of starch-degrading enzymes	T. E. GOTTSCHALK, H.-P. FIEROBE, E. MIRGORODSKAYA, A. J. CLARKE, D. TULL, B. W. SIGURSKJOLD, T. CHRISTENSEN, N. PAYRE, T. P. FRANDSEN, N. JUGE, K. A. MCGUIRE, S. COTTAZ, P. ROEPSTORFF, H. DRIGUEZ, G. WILLIAMSON AND B. SVENSSON	198
Specificity of ferulic acid (feruloyl) esterases	G. WILLIAMSON, C. B. FAULDS AND P. A. KROON	205

colloquium: The Gut as a Modulatory Site in Macronutrient Metabolism

Molecular and intracellular events in the assembly and secretion of chylomicrons by enterocytes	I. J. CARTWRIGHT AND J. A. HIGGINS	211
The role of gastrointestinal hormones in carbohydrate and lipid metabolism and homeostasis: effects of gastric inhibitory peptide and glucagon-like peptide-1	L. M. MORGAN	216
Modification of the gut flora by dietary means	G. R. GIBSON AND A. L. MCCARTNEY	222
Effect of non-digestible fermentable carbohydrates on hepatic fatty-acid metabolism	N. M. DELZENNE AND N. KOK	228
Salvage of urea-nitrogen in the large bowel: functional significance in metabolic control and adaptation	A. A. JACKSON	231
Bcl-2 as a possible sensor of nutritional stress inhibiting apoptosis and allowing cell survival during colorectal carcinogenesis	B. SINGH AND C. PARASKEVA	236

colloquium: Brain Lipids and Mental Disorders

Plasmalogen-selective phospholipase A₂ and its involvement in Alzheimer's disease	A. A. FAROOQUI AND L. A. HORROCKS	243
The role of docosahexaenoic acid in brain development and fetal alcohol syndrome	G. C. BURDGE	246
Do long-chain polyunsaturated fatty acids influence infant cognitive behaviour?	J. S. FORSYTH, P. WILLATTS, M. K. DIMODOGNO, S. VARMA AND M. COLVIN	252
Role of apolipoprotein E in modulating neurite outgrowth: potential effect of intracellular apolipoprotein E	R. E. PITAS, Z.-S. JI, K. H. WEISGRABER AND R. W. MAHLEY	257
Apolipoprotein E and neuronal plasticity following experimental de-afferentation and in Alzheimer's disease	M. DANIK AND J. POIRIER	262
Pharmacological, physiological and clinical implications of the discovery of cannabinoid receptors	R. G. PERTWEE	267
Herpes simplex virus type 1 and the type 4 allele of the apolipoprotein E gene are a combined risk factor for Alzheimer's disease	R. F. ITZHAKI AND W.-R. LIN	273

Pre- and Post-Partum Nutrition and Metabolism		
A simple method for the extraction and quantification of daidzein and genistein in food using gas chromatography MS	J. LIGGINS, L. BLUCK, W. A. COWARD AND S. A. BINGHAM	S87
Flux control exerted by mitochondrial outer membrane carnitine palmitoyltransferase over ketogenic flux in hepatocytes isolated from suckling rats	K. J. NEW, K. R. F. ELLIOTT AND P. A. QUANT	S88
Gestational and neonatal expression and activity of human hepatic 3-hydroxy-3-methylglutaryl-CoA synthase	C. V. LASCELLES AND P. A. QUANT	S89
Effect of maternal fatty acid supply on umbilical cord and piglet tissue composition	J. A. ROOKE, I. M. BLAND AND S. A. EDWARDS	S90
β -Oxidation in neonatal cardiac mitochondria	S. EATON, M. POURFARZAM, K. BARTLETT AND P. A. QUANT	S91
Ca^{2+} inhibits Mg^{2+} -mediated trophoblast cell adhesion to extracellular matrix <i>in vitro</i>	C. M. R. BAX AND T. CHARD	S92
Transition metal cations potently mediate adhesion of trophoblast cells to extracellular matrix <i>in vitro</i>	C. M. R. BAX AND T. CHARD	S93
Choline metabolism in the neonatal period	H. C. HOLMES, G. J. A.I. SNODGRASS AND R. A. ILES	S94
The general transcription factor Sp1 plays an important role in the regulation of fatty acid synthase	S. S. WOLF, K. H. RODER AND M. SCHWEIZER	S95
Expression of a sodium-dependent L-carnitine transporter in lactating rat mammary tissue	V. A. ZAMMIT, A. GRANT, R. R. RAMSAY, C. BURNS AND D. B. SHENNAN	S96
Prematurity: influence of atopic status and infant feeding practices on specific IgG levels in cord and infant serum	F. NORRIS, M. LARKIN, C. WILLIAMS, S. DEACOCK, J. MORGAN AND S. HAMPTON	S97
Hyperleptinaemia precedes hyperinsulinaemia in Zucker (<i>fafa</i>) rats	D. V. RAYNER, T. ATKINSON, G. D. DALGLEISH, J. S. DUNCAN, N. HOGGARD AND P. TRAYHURN	S98
Copper and iron interactions in a placental cell line (BeWo)	R. DANZEISEN AND H. J. McARDLE	S99
Growth-sensitive genes expressed in the placenta	S. M. HAY, D. N. HARRIES, C. ANTIPATIS AND W. D. REES	S100
The role of polyamines in pregnancy	S. R. SOORANNA, J. HIRANI AND I. DAS	S101
Regulation in Metabolism Group		
Changes in ferrozine-detectable iron in liver cells during hypoxia and hypothermia	G. PUNSHON AND B. FULLER	S102
Screening for the trifunctional protein Gly ¹⁵²⁸ →Cys ¹⁵²⁸ mutation in alcoholic liver disease	S. EATON, C. O. RECORD AND K. BARTLETT	S103
Education Group		
Problem-based learning in modular science degrees	L. JERVIS	S104
Are we getting W.I.S.E. (women into science and engineering) or do we still have W.A.S.T.E. (women-averse science, technology and engineering)?	L. M. JERVIS AND L. JERVIS	S105

Exocytosis and Clostridial Toxins

Distribution and activities of neuronal protein 4.1 isotypes	C. SCOTT, M. L. BELLAMY, N. V. L. HAYES AND A. J. BAINES	SI06
Intracellular localization of β 1 Σ 2 spectrin with GLUT4 vesicles	S. L. CORCORAN, N. V. L. HAYES, S. NICOL, A. J. BAINES AND H. M. THOMAS	SI07
A method for the measurement of [³ H]glutamate release from cultured dorsal root ganglion neurons	J. R. PURKISS, M. J. WELCH, S. DOWARD, K. A. FOSTER AND C. P. QUINN	SI08

Neurochemical Group

Interaction of synapsin IIb with calmodulin: identification of a high-affinity site	S. NICOL, D. RAHMAN AND A. J. BAINES	SI09
Interaction of synapsin I with actin and small synaptic vesicles: differential regulation by calmodulin	S. NICOL, D. RAHMAN, K.-M. CHAN AND A. J. BAINES	SI10
The effect of cytochalasin D and colcemid on noradrenaline release in the human neuroblastoma SH-SY5Y	K. DANKS, J. H. WALKER AND P. F. T. VAUGHAN	SI11

Intracellular and Extracellular Lectins

8-Cyclopentyl theophylline (CPT) corrects anti-(cystic fibrosis transmembrane conductance regulator) antibody-inhibited mucin secretion	M. M. C. PEREIRA, R. L. DORMER AND M. A. MCPHERSON	SI12
Remodelling glycans on IgG by genetic re-engineering	R. JASSAL, J. LUND AND N. JENKINS	SI13
Physiological influences on recombinant IgG glycosylation	P. SHAH, M. REECE-FORD, S. DONG, M. GOODALL, S. PIDAPARTHI, R. JEFFERIS AND N. JENKINS	SI14
Genetic engineering of α 2,6-sialyltransferase in recombinant Chinese hamster ovary cells	N. JENKINS, L. BUCKBERRY, A. MARC AND L. MONACO	SI15

Glycobiology Group

Fragmentation patterns of human paranasal sinus mucins	M. S. ALI, D. A. HUTTON, J. P. PEARSON AND J. A. WILSON	SI16
MUC5B expression in middle-ear mucosal glands	D. A. HUTTON, L. GUO, J. P. BIRCHALL, T. L. SEVERN AND J. P. PEARSON	SI17
Protein glycosylation and peripheral vascular disease in diabetic patients	A. D. KHATTAB, I. S. ALI, J. BOWLEY, R. R. DILS, S. G. DARKE, D. KERR AND M. Z. RANA	SI18

Membrane Group

Protein–protein and protein–lipid interactions of the calcium-dependent lipid-binding domain	A. J. DAVIS, A. H. M. CHOW AND D. J. GAWLER	SI19
Identification of a monocarboxylate transporter isoform type I (MCT1) on the luminal membrane of human and pig colon	A. RITZHAUPT, I. S. WOOD, A. ELLIS, K. B. HOSIE AND S. P. SHIRAZI-BEECHEY	SI20

Sequence comparisons of ruminant renal Na ⁺ /phosphate co-transporters	I. S. WOOD, L. T. FORD, D. SCOTT, W. D. REES AND S. P. SHIRAZI-BEECHEY	S121
Isolation of a reverse transcriptase PCR fragment from human colon and sheep rumen RNA with nucleotide sequence similarity to human and rat urea transporter isoforms	A. RITZHAUPT, I. S. WOOD, A. A. JACKSON, B. J. MORAN AND S. P. SHIRAZI-BEECHEY	S122
Molecular modelling of the mechanisms of bile acid transport by the hepatocyte canalicular ecto-ATPase (CAM-105)	J. G. L. MULLINS, J. ANTONIW, S. S. GILANI, G. M. MURPHY AND M. L. WILKINSON	S123

Biochemical Immunology Group

Does glutathione flush reduce acute cellular rejection in liver allografts?	M. EL-WAHSH, B. J. FULLER, N. S. SREEKUMAR, A. K. BURROUGHS, P. A. DHILLON, B. R. DAVIDSON AND K. ROLLES	S124
Adhesion molecule activation and hepatocyte damage following orthotopic liver transplantation (OLT)	M. EL-WAHSH, B. J. FULLER, N. S. SREEKUMAR, A. K. BURROUGHS, P. A. DHILLON, F. LAMPE, K. ROLLES AND B. R. DAVIDSON	S125

Molecular and Cellular Pharmacology Group

A green fluorescent protein–protein kinase C fusion protein to investigate the mechanism of protein kinase C down-regulation	N. SMART AND N. T. GOODE	S126
Serum total antioxidant status during vascular surgery	A. BROWN, S. DUGDILL, M. WYATT AND D. MANTLE	S127
Regulation of phospholipase C δ_1 activity by GTP-binding proteins: RhoA as an inhibitory modulator	E. A. M. HODSON, C. C. ASHLEY, A. D. HUGHES AND J. S. LYMN	S128
Synthesis and characterization of tagged human oxytocin receptors (hOTRs)	N. J. YARWOOD, S. R. HAWTIN AND M. WHEATLEY	S129
ADP-ribosyltransferase inhibitors and pseudosubstrates inhibit rat smooth-muscle cell migration <i>in vitro</i>	B. SAXTY, M. YADOLLAHI-FARSANI, P. KEFALAS, S. PAUL AND J. MACDERMOT	S130
Pyridoxal phosphate-6-azophenyl-2,4-disulphonic acid and extracellular ATP both mediate endothelial-dependent relaxation of guinea-pig aorta	S. J. READING, S. DAHL, C. H. GAUNT, I. P. L. COLEMAN AND C. A. BROWN	S131
Regulation of phospholipase C γ_1 activity by GTP-binding proteins in vascular smooth muscle	E. A. M. HODSON, C. C. ASHLEY AND J. S. LYMN	S132
Differential expression of phospholipase C γ_1 in Wistar Kyoto compared with spontaneous hypertensive rats	J. C. HAYNES, E. A. M. HODSON AND J. S. LYMN	S133
Streptozotocin-induced diabetes is associated with increased renal lipoxygenase activity	V. C. STEWART, P. H. WHITING, J. A. BELL AND G. M. HAWKSWORTH	S134

Nucleic Acids and Molecular Biology Group

The significance of 2' and 3' aminoacylation of RNA in the origin of amino acid homochirality	J. M. BAILEY	S135
Angiotensin-converting enzyme (ACE) gene polymorphism and alcoholism	A. GARRIB AND T. J. PETERS	S136

Angiotensin-converting enzyme (ACE) gene polymorphism in patients with sarcoidosis	A. GARRIB, W. ZHOU, R. SHERWOOD AND T. J. PETERS	S137
Selective expression of a novel striated-muscle protein	P. MASON, S. BAYOL, C. BROWNSON AND P. LOUGHNA	S138
<hr/>		
Protein and Peptide Science Group		
Autocatalytic processing of mutant simian immunodeficiency virus proteinase polyproteins	A. MOLOUDI, V. M. GOOD, M. M. ANDERSON, J. J. BAKER, C. H. JAMES AND A. F. WILDERSPIN	S139
<hr/>		
Techniques Group		
Free-radical analysis via ESR spectroscopy during vascular surgery	A. BROWN, S. DUGDILL, M. WYATT, P. COOPER AND D. MANTLE	S140
<hr/>		
Brain Lipids and Mental Disorders		
Kinetics of reactive oxygen intermediate formation and apoptosis in human glioma and glioma C6 cell line: effects of radiation and <i>n</i> -6 essential fatty acids	J. R. WILLIAMS, H. A. LEAVER, J. W. IRONSDIE, A. GREGOR, E. MILLER AND I. R. WHITTLE	S141
Depletion of docosahexanoic acid in red-blood-cell membranes of depressive patients	R. EDWARDS, P. MALCOLM, J. SHAY AND D. HORROBIN	S142
Interactions of nitric oxide, free radicals and polyamines in the membrane pathology of schizophrenia	D. DAS, N. DE FONSEKA AND I. DAS	S143
The production of a transgenic rat expressing nerve growth factor using cell-type specific keratin promoters	A. CHITER, G. E. BLAIR AND A. E. KING	S144
<hr/>		
Lipid Group		
Effect of insulin and serum on lipoprotein lipase in lactation	M. P. ROGERS AND X. ZHAO	S145
C-terminal His ₆ -tagged lecithin-cholesterol acyltransferase (LCAT) is catalytically active	D. V. VINOGRADOV, L. HONGQUN AND J. S. OWEN	S146
Immunoaffinity-isolation of plasma lecithin-cholesterol acyltransferase (LCAT) from patients with hepatic cirrhosis	D. CHAWLA, A. M. MALIK, V. L. M. LIMA AND J. S. OWEN	S147
Plasma, platelet and erythrocyte lipids in the Watanabe heritable hyperlipidaemic (WHHL) rabbit	S. RAFIQUE AND J. S. OWEN	S148
Chylomicron remnants derived from fish oil are bound and internalized more rapidly by isolated hepatocytes than those derived from olive or palm oil	M. S. LAMBERT, M. A. AVELLA, E. SHERVILL, Y. BERHANE AND K. M. BOTHAM	S149
Effects of oestrogen on plasma, hepatic and biliary cholesterol levels in rats fed fish oil	K. M. BOTHAM, M. A. AVELLA, A. CANTAFORA AND E. BRAVO	S150
Biochemical studies of oil biosynthesis in olive (<i>Olea europaea</i>) and oil palm (<i>Elæis guineensis</i>) callus cultures	U. S. RAMLI, P. A. QUANT AND J. L. HARWOOD	S151
Characteristics of wheat-seed lipase	C. M. SAUNDERS, A. P. MORBY, D. L. WILLEY AND J. L. HARWOOD	S152

Genetic mechanisms involved in the adaptation of marine algae to heavy-metal pollution	C. A. MORRIS, B. NICOLAUS, P. KILLE AND J. L. HARWOOD	S153
Reaction products of the lipoxygenase pathway in olive tissue cultures	M. WILLIAMS AND J. L. HARWOOD	S154
The effects of Iprodione on the lipid metabolism of <i>Botrytis cinerea</i>	R. G. GRIFFITHS, J. DANCER AND J. L. HARWOOD	S155
<i>trans</i> -Mono-unsaturated fatty acid and the oxidation of low-density lipoproteins	T. BUNCE, M. JACOBS AND K. R. BRUCKDORFER	S156
<i>trans</i> -Mono-unsaturated fatty acids and tissue factor activity in a monocytic cell line	T. BUNCE, M. JACOBS AND K. R. BRUCKDORFER	S157
Modulation of colonocyte proliferation and apoptosis by dietary fish oil in experimental colorectal carcinogenesis	P. LATHAM, E. K. LUND AND I. T. JOHNSON	S158
The effect of prostaglandin E2 on the intracellular lipolysis of triacylglycerol in cultured rat hepatocytes	A.-M. HEBBACHI, M. C. L. SEELAENDER AND G. F. GIBBONS	S159
<hr/>		
Capturing Light Energy: The Role of the Protein		
Crystallizing the light-harvesting-I reaction-centre 'core' complex of purple bacteria	C. J. LAW, S. M. PRINCE AND R. J. COGDELL	S160
<hr/>		
Bioenergetics Group		
Effects of indomethacin on mitochondrial ATP synthesis	M. JACOB, I. BJARNASON AND R. J. SIMPSON	S161
Effects of indomethacin on mitochondrial oxygen uptake in intestine	M. JACOB, I. BJARNASON AND R. J. SIMPSON	S162
<hr/>		
Enzymology of cell-wall degradation		
Adenosine deaminase activity: to be a useful marker in distinguishing pleural effusions due to malignancy from tuberculosis	F. KURALAY AND A. ÇÖMLEKÇİ	S163
Identification of active-site residues in a ferulic acid esterase (FAE-III) from <i>Aspergillus niger</i>	F. O. ALIWAN AND G. WILLIAMSON	S164
Stability of feruloyl esterases from <i>Aspergillus</i>	C. B. FAULDS, R. DE VRIES, J. VISSER AND G. WILLIAMSON	S165
Properties of ferulate dimers from plant cell walls	G. W. PLUMB, M. T. GARCIA-CONESA, P. A. KROON, G. WALLACE AND G. WILLIAMSON	S166
Three distinct ferulic acid esterases produced by <i>Aspergillus niger</i> have specificities for different phenolic-sugar linkages in plant cell walls	P. A. KROON AND G. WILLIAMSON	S167
Enzymic hydrolysis of diferulates from wheat bran cell walls	M. T. GARCIA-CONESA, P. A. KROON AND G. WILLIAMSON	S168
Plant cell-wall-degrading complexes from the cellulolytic rumen bacterium <i>Ruminococcus flavefaciens</i>	J. KIRBY, V. AURILIA, S. I. MCCRAE, J. C. MARTIN AND H. J. FLINT	S169

Molecular Enzymology Group

Determination of the catalytic-site content of a polyclonal catalytic-antibody preparation	M. RESMINI, S. GUL, S. SONKARIA, G. GALLACHER AND K. BROCKLEHURST	S170
Sensitivities of transition-state geometries to P ₁ -P ₂ binding in reactions of papain and actinidin	S. GUL, S. PINITGLANG, E. W. THOMAS, C. VERMA AND K. BROCKLEHURST	S171
The kinetically influential ionizations of caricain Asp158→Asn158 revealed by using 4,4'-dipyrimidyl disulphide as a reactivity probe	A. KHAN, I. F. CONNERTON, N. J. CUMMINGS, S. HUSSAIN, M. A. NOBLE, M. A. J. TAYLOR, E. W. THOMAS, C. VERMA AND K. BROCKLEHURST	S172
Detection of a free enzyme isomerization in actinidin-catalysed hydrolysis	J. D. REID, S. SREEDHARAN, A. COLE, S. MASKELL, A. BOKTH, E. W. THOMAS AND K. BROCKLEHURST	S173
The role of Mg ²⁺ in biotin carboxylation in pyruvate carboxylase	P. V. ATTWOOD	S174
Production of a yeast cell-wall-degrading enzyme, β-1,3-glucanase, by recombinant <i>Bacillus subtilis</i>	S. CHUEN-IM AND H. C. LYNCH	S175

The Gut as a Site of Modulation in Macronutrient Metabolism

Use of argentation TLC with GC to resolve C _{18:1} fatty acid isomers in test and commercial spreads	J. C. BROWN, D. A. HUGHES AND J. C. STANLEY	S176
Effects of body size on postprandial lipid metabolism in postmenopausal women	J. A. LOVEGROVE, H. OSBORN, H. ASHWORTH, J. W. WRIGHT AND C. M. WILLIAMS	S177
Effect of the bile acid: fatty acid ratio on <i>in vivo</i> essential fatty acid absorption in the rat	J. G. L. MULLINS, A. T. GREEN, R. P. H. THOMPSON AND N. A. PUNCHARD	S178
Functional expression of Na ²⁺ -independent bile acid transport in <i>Xenopus laevis</i> oocytes following injection with pig intestinal mRNA	J. G. L. MULLINS, G. L. KNIGHT, S. S. GILANI, G. M. MURPHY AND M. L. WILKINSON	S179
Sugar analogues as potential inhibitors of the intestinal Na ⁺ /glucose co-transporter (SGLT1)	J. DYER, R. NASH AND S. P. SHIRAZI-BEECHEY	S180
Cloning and characterization of the ovine Na ⁺ /D-glucose co-transporter promoter	G. G. ALLISON, I. S. WOOD AND S. P. SHIRAZI-BEECHEY	S181
Trimethylamine N-oxide as a probable source of urinary dimethylamine in man; a statistical approach	S. C. MITCHELL, A. ZHANG, R. L. SMITH AND A. J. BIRLEY	S182
Mechanisms of inhibition of hepatic secretion of very-low-density lipoproteins by dietary fish oils	J. S. KENDRICK, J. WILKINSON AND J. A. HIGGINS	S183
Lactose [¹³ C]ureide as a marker for colonic fermentation and the deconvolution of a complex ¹³ CO ₂ breath test curve	D. J. MORRISON, R. ZAVOSHY, C. A. EDWARDS, B. DODSON, T. PRESTON AND L. T. WEAVER	S184
Pea flour digestibility and fermentability measured with ¹³ C isotopes	C. A. EDWARDS, R. ZAVOSHY AND T. PRESTON	S185
The effect of a three week high-fat diet on the mouth to caecum transit time of a high-fat meal in humans	A. HENDERSON, G. VIST AND D. RUMSEY	S186
Faecal concentrations of biologically active diacylglycerols in humans	J. M. GEE, A. C. J. POLLEY, T. C. GOTTS, D. A. FAIRBAIRN AND I. T. JOHNSON	S187

Influence of lipid content of testmeal on gastro-intestinal handling and metabolic partitioning of dietary lipid in young men	J. BENNOSON, A. JONES, A. HUMAYAN AND S. WOOTTON	S188
Gastro-intestinal transit adaptation to low- and high-fat cafeteria diets	D. RUMSEY AND A. SHAFAT	S189
Gastro-intestinal transit adaptation to high-fat diet in the rat	A. SHAFAT AND D. RUMSEY	S190
Copper and iron homeostasis in mammalian cells and cell lines	R. J. WARD, M.-L. SCARINO, A. LEONE, R. R. CRICHTON AND H. J. McARDLE	S191