

FOSTER M. A., FOWLER P. A., FULLER M. F. & KNIGHT C. H. Non-invasive methods for assessment of body composition	375-385
ASTON R., HOLDER A. T., WALLIS M., BATES P. C. & BOMFORD R. Enhancement of growth hormone activity in vivo by monoclonal antibodies: potential for autoimmunization	387-395
DAVIES MICHAEL J. & SLATER TREVOR F. The use of electron-spin-resonance techniques to detect free-radical formation and tissue damage	397-405
BUCKLEY WAYNE T. The use of stable isotopes in studies of mineral metabolism	407-416

ABSTRACTS OF COMMUNICATIONS

*Four Hundred and Forty-eighth Scientific Meeting
One Hundred and Seventy-seventh Scottish Meeting
Craigie College of Education, Ayr
7/8 APRIL 1988*

WALKER J. & KINDLEN S. The effect of practice on the measurements of skinfold thickness by an inexperienced observer	142A
BREVES G. & HOLLER H. Unidirectional calcium and phosphate fluxes across the isolated mucosa from the rumen and omasum of sheep	143A
YOUNG A., NZEGWU HELEN C. & LEVIN R. J. Glucose feeding during starvation and its effects on secretion in the rat ileum and colon	144A
BARBER M. C. & DILS R. R. Inverse relation between DNA synthesis and casein mRNA synthesis in mammary epithelial organoids from mid-pregnant mice	145A
CASEY C. E. Zinc, copper and manganese in human milk in late lactation	146A
IMONG S. M., JACKSON D. A., SILPRASERT A., WONGSAWASDI L., CHIOWANICH P., WOOLRIDGE M. W., BAUM J. D. & AMATAYAKUL K. Interactions between breast and supplementary feeding in rural northern Thailand	147A
EVANS R. D. & WILLIAMSON D. H. Effects of tumour implantation on the onset of lactation in the rat	148A
MERCER S. W. & WILLIAMSON D. H. Inhibition of insulin release by mannoheptulose decreases mammary gland glucose uptake, lipogenesis and phosphofructokinase activity in starved-refed lactating rats	149A
METCALF J. A. & WEEKES T. E. C. Effect of feeding level on insulin sensitivity during lactation in the ewe	150A
STANGASSINGER M. & GIESECKE D. Changes in circulating insulin and in insulin-receptor affinity of erythrocytes in dairy cows around parturition	151A
SWART J. N., WILKE P. I., VAN DER MERWE H. J. & SMITH A. The use of ammonium acetate for milk-fat production in high-producing dairy cows	152A
WILTON J. C., GILL M. & LOMAX M. A. Uptake of ammonia across the liver of forage-fed cattle	153A
NEWBOLD C. J. & CHAMBERLAIN D. G. Lipids as rumen-defaunating agents	154A
CARTER R. R. & GROVUM W. L. Observations on how sodium chloride loading of the rumen depresses food intake in sheep	155A
CARTER R. R. & GROVUM W. L. Effect of feeding frequency on total (sham-feeding) and unilateral parotid (normal-feeding) saliva production in sheep	156A
CAMPBELL D. M., RADCLIFFE M. A. & SMITH A. D. Lipolysis and fat cell size in subcutaneous adipose tissue from women breast-feeding and those artificially feeding their babies	157A
BUTTERWICK R. F., WEEKES T. E. C., ROWLINSON P., PARKER D. S. & ARMSTRONG D. G. The effect of long-term administration of bovine somatotrophin on plasma hormone and metabolite levels in dairy heifers during their first lactation	158A

*Four Hundred and Fiftieth Scientific Meeting
Physics Lecture Theatre, Faraday Complex, University of Lancaster, Lancaster
12/13 APRIL 1988*

NOBLE R. C. & OGUNYEMI D. Absorption of residual yolk and liver lipid changes in the newly hatched chick	160A
YAFEI N. & NOBLE R. C. Yolk lipid uptake by the chick embryo: an electron microscope study with reference to low hatchability in young parent stock	161A
HEATON F. W., TONGYAI S. & RAYSSIGUIER Y. Increased fluidity of the erythrocyte membrane in magnesium deficiency	162A
RAYSSIGUIER Y., TONGYAI S., GUEUX E., MOTTA C. & HEATON F. W. Lipid composition and erythrocyte membrane fluidity in magnesium deficiency	163A
NZEGWU HELEN C., PEREIRA M. M. C., WARREN M. A., LEVIN R. J. & YOUNG A. Acute and chronic under-nutrition and their effects on rat colonic secretion	164A
CARNIE J. A., LEFEUVRE R. A., LINTON E. A., MCCARTHY H. D. & ROTHWELL N. J. Thermogenic effects of corticotrophin-releasing factor in genetically obese Zucker rats	165A
COOPER A., HORAN M. A., LITTLE R. A., ROTHWELL N. J. & STRIJBOS P. J. L. M. Acute thermogenic responses to intramuscular typhoid vaccination in man	166A
ROWE J. B. & CROSBIE G. B. Nutritive value of oat grain: the importance of hull lignin	167A
SCOLLAN N. D., BRISBANE J. R. & JESSOP N. S. Effect of diet and level of intake on the activities of acetyl-CoA synthetase and acetyl-CoA hydrolase in ovine adipose tissue	168A
EAYRES H., ANDERSON D. & OLDHAM J. D. Substitution of barley and sugar-beet pulp for hay in young and adult wether sheep	169A
FRIGGENS N., EMMANS G. C., ROBERTSON S., CHAMBERLAIN D. G. & OLDHAM J. D. Responses of dairy cows to variation in plane of nutrition and to source of metabolizable energy	170A

Proceedings of the Nutrition Society

CONTENTS OF VOL. 47, No. 3, SEPTEMBER 1988

Obituary Notice

PAGE

YORK D. A. Obituary notice, T. G. Taylor (1919-1987).....	191-193
---	---------

SYMPOSIUM PROCEEDINGS

Four Hundred and Fortieth Scientific Meeting
Babbage Lecture Theatre, University of Cambridge, Cambridge
 16/17 JULY 1987

STABLE ISOTOPIC METHODS FOR MEASURING ENERGY EXPENDITURE

Chairmen: N. LIFSON, *Department of Physiology, University of Minnesota, USA*

E. M. WIDDOWSON, *Department of Medicine, University of Cambridge, Cambridge*

R. G. WHITEHEAD, *Dunn Nutrition Unit, Cambridge*

JAMES W. P. T., HAGGARTY P. & MCGAW B. A. Recent progress in studies on energy expenditure: are the new methods providing answers to the old questions?	195-208
COWARD W. A. The doubly-labelled-water (² H ₂ ¹⁸ O) method: principles and practice	209-218
JÉQUIER ERIC & SCHUTZ YVES Classical respirometry and the doubly-labelled-water (² H ₂ ¹⁸ O) method: appropriate applications of the individual or combined techniques	219-225
FIELD C. R., SCHOELLER D. A. & BROWN K. H. Energy expenditure of malnourished children during catch-up growth	227-231
VASQUEZ-VELASQUEZ L. Energy expenditure and physical activity of malnourished Gambian infants	233-239
SCHOELLER D. A., BANDINI L. G., LEVITSKY L. L. & DIETZ W. H. Energy requirements of obese children and young adults	241-246
ELIA M., FULLER N. & MURGATROYD P. The potential use of the labelled bicarbonate method for estimating energy expenditure in man	247-258
PRENTICE A. M. Applications of the doubly-labelled-water (² H ₂ ¹⁸ O) method in free-living adults	259-268

Four Hundred and Forty-second Scientific Meeting
University of Reading, Reading
 14/15 SEPTEMBER 1987

DIETS IN TRANSITION: HUMAN HEALTH AND ANIMAL PRODUCTION

Chairmen: M. R. TURNER, *London*

J. F. D. GREENHALGH, *School of Agriculture, University of Aberdeen, Aberdeen*

LEWIS BARRY Nutrition, coronary heart disease and preventive medicine	269-275
GURR M. I. Lipid metabolism in man	277-285
VERNON R. G. & FLINT D. J. Lipid metabolism in farm animals	287-293
BUSS DAVID H. Is the British diet improving?	295-306
THELLE DAG S. Patterns of dietary change: the Scandinavian experience	307-314
HARRINGTON GEOFF Meat and meat products: changes in demand and supply	315-321
ROBERTS D. J. Changes in the demand and supply for milk and dairy products	323-329
LISTER DAVID Diets in transition: human health and animal production. Consequences for agriculture and some possible new approaches	331-342
SHRIMPTON D. H. The nation's diet in context: the future	343-347

Four Hundred and Forty-fourth Scientific Meeting
One Hundred and Seventy-fourth Scottish Meeting
 29/30 SEPTEMBER 1987

TECHNIQUES FOR THE MEASUREMENT OF METABOLIC REGULATION AND ORGAN FUNCTION

Chairmen: J. C. MACRAE, *Rowett Research Institute, Bucksburn, Aberdeen*

W. P. T. JAMES, *Rowett Research Institute, Bucksburn, Aberdeen*

GADIAN D. G. Metabolic studies using localized magnetic resonance spectroscopy	349-352
CRABTREE B. & LOBLEY G. E. Measuring metabolic fluxes in organs and tissues with single and multiple tracers	353-364
HAGGARTY P. & MCGAW B. A. Non-restrictive methods for measuring energy expenditure	365-374

[Continued on p. iii of wrapper]

© The Nutrition Society, 1988

CAMBRIDGE UNIVERSITY PRESS
 The Pitt Building, Trumpington Street, Cambridge CB2 1RP
 32 East 57th Street, New York, NY 10022, USA
 10 Stamford Road, Oakleigh, Melbourne 3166, Australia

Lampport Gilbert Printers Ltd., Reading, England