

Index of Subjects

- Abomasum, differential rates of passage, water and dry matter, sheep 231
- Abomasum, proteolytic activity development, pre-ruminant calf 285
- Absorption, glucose, galactose and lactose, pre-ruminant calf 331
- Absorption, glycine and glycyglycine, jejunum, man 13
- Absorption, intestines, high-moisture maize diets, pig 401
- Absorption, iron, dried skim milk or maize-soya-bean-milk (CSM) diet, Jamaican child 577
- Absorption, trace-minerals, young New Zealand women 195
- Absorption, water and electrolytes, large intestine, effect of food intake, sheep 221
- Absorption kinetics, lactose, Zambian man 519
- Acetyl-CoA carboxylase activity, liver, effect of dietary fat, broiler chicken 545
- Albumin metabolism, fasting, obese man 585
- Allantoin, excretion, rat 107
- Amino acid(s) *see also* Cystine, Glycine, Histidine, Leucine, Lysine, Methionine, Peptides, Selenomethionine, Threonine, Valine
- Amino acid composition, Chorleywood Bread Process and conventional bread 186
- Amino acid composition, effect of diet and breed, hen's egg 189
- Anaemia, relation to iron requirements, veal calf 61
- Antibiotics *see also* Oxytetracycline
- Aromatic acids, urinary excretion, relationship to protein metabolism, rumen, fed and fasted sheep 251
- Baboon 171
- Birth weight, low, response to oral pteroylmonoglutamic acid, infant 165
- Blood composition, effect of amino acid fortified rice diets, Indian child 241
- Body composition, relationship to deuterium oxide space, pig 149
- Bone development, effects of carotene and calcium content, dietary supplements, Indian child 77
- Bread, nutrient content, Chorleywood Bread Process and conventional loaves 181
- Cadmium balance, young New Zealand women 195
- Calcium, dietary supplements, effect on nutritional status, Indian child 77
- Calcium metabolism, evaluation of four techniques, rat 425
- Calf *see also* Cattle
- Calf 61, 113, 211, 269, 285, 331, 491
- Carbohydrase activity, small intestine, calf 269
- Carbohydrate deficiency, effect of meal-feeding, rat 37
- Carcass composition, effect of dietary DL-methionine supplements, growing pig 437
- Carotene, dietary supplements, effect on nutritional status, Indian child 77
- Cassava, effect on thyroid iodine metabolism, rat 511
- Cattle *see also* Calf
- Cattle 207
- Chick *see also* Hen
- Chick 501, 545
- Child *see also* Man
- Child 77, 165, 241, 345, 567, 577
- Chlorella protein, ¹⁵N-labelled, metabolism and nutritive value, rat 411
- Copper, dietary supplements, effect on iron requirements, veal calf 61
- Copper balance, young New Zealand women 195
- Cystine + methionine requirements, growing pig 437
- Dehydroretinol, formation from lutein, freshwater fish *Saccobranchus fossilis* 1
- Desaturase activity, liver, effect of dietary fat, broiler chicken 545
- Diet, chopped or pelleted hay, relationship of palatability to food intake, sheep 95
- Diet(s), dried skim milk and maize-soya-bean-milk (CSM), effects of iron fortification, Jamaican infant 577
- Diet, effect on amino acid composition, hen's egg 189
- Diet(s), high-moisture maize, digestion and absorption, intestines, pig 401
- Diet, milk, protein requirements, lamb 45
- Diet, starch or sucrose, protein-energy malnutrition, liver pathology, baby baboon 171
- Diet, straw-based, effect of feeding frequency on duodenal digesta, sheep 87
- Diet, traditional weaning foods, relationship between energy, linoleic acid and kwashiorkor, Nigerian child 567
- Digesta, duodenal, flow and composition, effect of feeding frequency, sheep 87
- Digesta, rate of passage, theoretical considerations and computer simulation, sheep 377
- Digesta, retention time, large intestine, effect of food intake, sheep 221
- Digestion, high-moisture maize diets, intestine, pig 401
- Digestion, sulphur, forage diets, sheep 537
- Energy, dietary, relationship to kwashiorkor, traditional weaning diet, Nigerian child 567

- Energy expenditure, standing and resting, cattle 207
- Energy intake, effect on protein requirements, growing lamb 45
- Energy retention, effect of environmental temperature and plane of nutrition, growing pig 21
- Energy supplement, effect of rumen bypass on concentrate intake, sheep 361
- Enzymes *see also* Acetyl-CoA carboxylase, Carbohydrazase, Desaturase, Transketolase
- Enzyme activity, proteolytic, development in abomasum and stomach, preruminant calf, rabbit, guinea-pig 285
- Enzyme activity, proteolytic, stomach and pancreas, doe-suckled and hand-reared rabbit 351
- Erythrocytes, transketolase activity, relationship to thiamin status, pig 391
- Excretion, allantoin, rat 107
- Excretion, trace minerals, young New Zealand women 195
- Excretion, urinary, aromatic acids, relationship to protein metabolism, rumen, fed and fasted sheep 251
- Exercise, effect on water balance and mineral excretion, hot climate, man 127
- Fat, deposition, effects of environmental temperature and plane of nutrition, growing pig 21
- Fat, dietary, effect on fatty acid metabolism, broiler chicken 545
- Fatty acid(s), *see also* Linoleic acid, Propionate
- Fatty acid diet, effects of meal-feeding, rat 37
- Fatty acid metabolism, broiler chicken 545
- Feeding frequency, effect on flow and composition, duodenal digesta, sheep 87
- Fermentation pattern, rumen contents, in vitro, effect of methane inhibitors, molasses diet, sheep 369
- Fish *see also* *Saccobranchus fossilis*
- Fish 1
- Flow, duodenal digesta, effect of feeding frequency, sheep 87
- Food composition, Chorleywood Bread Process and conventional bread 181
- Food intake, concentrates, effect of bypassing rumen with protein and energy supplements, sheep 361
- Food intake, effect on digesta retention time, large intestine, sheep 221
- Food intake, effect on water balance and mineral excretion, hot climate, man 127
- Food intake, effect on water and electrolyte absorption, large intestine, sheep 221
- Food intake, relationship to palatability, chopped or pelleted hay diet, sheep 95
- Food intake regulation, zinc-deficient rat 555
- Galactose, absorption, preruminant calf 331
- Genetic differences, effect of chronic hyperthermia on lipid metabolism, British and Zebu calves 211
- Glucose, absorption, preruminant calf 331
- Glucose, metabolism, kinetics, effects of plane of nutrition and pregnancy, sheep 451
- Glucose, synthesis from ruminal propionate, effect of plane of nutrition and pregnancy, sheep 475
- Glycine, absorption, jejunum, man 13
- Glycylglycine, absorption, jejunum, man 13
- Growth rate, effect of environmental temperature and plane of nutrition, pig 21
- Guinea-pig 285
- Heat loss, effects of environmental temperature and plane of nutrition, growing pig 21
- Hen *see also* Chick
- Hen 189
- Histidine catabolism, iron-deficient rat 447
- Hormone(s) *see also* Insulin
- β -Hydroxybutyrate, effect of plane of nutrition and pregnancy, sheep 451
- Insulin, circulation of 'big' insulin, protein-energy malnutrition, child 345
- Intestine, large, differential rates of passage, water and dry matter, sheep 231
- Intestine, large, effect of food intake on digesta retention times and water and electrolyte absorption, sheep 221
- Intestine, small, carbohydrazase activity, calf 269
- Intestine, small, effect of weaning on motility, calf 491
- Iodine, thyroid metabolism, action of cassava, rat 511
- Iron, absorption, dietary supplement, dried skim milk or maize-soya-bean-milk (CSM) diets, Jamaican infant 577
- Iron, excretion, effects of exercise and food intake, hot climate, man 127
- Iron, requirements, effect of copper supplementation, veal calf 61
- Iron balance, young New Zealand women 195
- Iron deficiency, histidine catabolism, rat 447
- Kwashiorkor, relationship to dietary energy and linoleic acid, traditional weaning diets, Nigerian child 567
- Lactose, absorption kinetics, Zambian man 519
- Lactose, digestion and absorption, preruminant calf 331
- Lamb *see also* Sheep
- Lamb 45
- Leucine, excess, effect on valine catabolism, chick 501
- Linoleic acid, dietary, relationship to kwashiorkor, traditional weaning diets, Nigerian child 567
- Lipid metabolism, effect of chronic hyperthermia, British and Zebu calves 211
- Liver, pathology, protein-energy malnutrition, baby baboon 171
- Lutein, conversion into dehydroretinol, freshwater fish *Saccobranchus fossilis* 1
- Lutein, extraction technique, cow dung 2

- Lymph-nodes, mesenteric, effects of oral anti-biotic administration, rat 157
- Lysine-fortified rice, nutritive value, Indian child 241
- Malnutrition, protein-energy, circulation of 'big' insulin, child 345
- Malnutrition, protein-energy, liver pathology, baby baboon 171
- Man *see also* Child
- Man 13, 127, 195, 277, 519, 585
- Markers, rate of passage, biological relevance of rate-constants, sheep 313
- Meal-feeding, effect on dietary carbohydrate deficiency, rat 37
- Metabolism, fatty acids, broiler chicken 545
- Metabolism, ¹⁵N-labelled *Chlorella* protein, rat 411
- Methane inhibitors, effect on in vitro fermentation pattern, rumen contents, molasses diet, sheep 369
- Methionine + cystine requirements, growing pig 437
- Milk, sulphur content, sheep 529
- Mineral(s) *see also* Cadmium, Calcium, Copper, Iodine, Iron, Molybdenum, Phosphorus, Potassium, Selenium, Sodium, Sulphur, Zinc
- Mineral balance, young New Zealand women 195
- Molybdenum balance, young New Zealand women 195
- Motility, small intestine, effect of weaning, calf 491
- Nicotinic acid, chemical nature, wheat bran 297
- Nitrogen balance, rapidly growing calf 113
- Nutritional status, effects of carotene and calcium content, dietary supplements, Indian child 77
- Nutritive value, *Chlorella* protein, rat 411
- Nutritive value, lysine- and threonine-fortified rice diets, Indian child 241
- Obesity, albumin metabolism, fasting man 585
- Oxytetracycline, dietary, morphological and functional effects, conventional rat 157
- Palatability, relationship to food intake, chopped or pelleted hay diet, sheep 95
- Pancreas, proteolytic activity, doe-suckled and hand-reared rabbit 351
- Peptides *see also* Glycylglycine
- Phosphorus, metabolism, evaluation of four techniques, rat 425
- Pig 21, 149, 391, 401, 437
- Plane of nutrition, effect on energy and protein metabolism, growing pig 21
- Plane of nutrition, effect on glucose synthesis from ruminal propionate, sheep 475
- Plane of nutrition, effect on kinetics of glucose metabolism, sheep 451
- Potassium, absorption, large intestine, effect of food intake, sheep 221
- Potassium, excretion, effects of exercise and food intake, hot climate, man 127
- Pregnancy, effect on glucose synthesis from ruminal propionate, sheep 475
- Pregnancy, effect on kinetics of glucose metabolism, sheep 451
- Propionate, rumen, gluconeogenesis, effect of plane of nutrition and pregnancy, sheep 475
- Protein, deposition, effects of environmental temperature and plane of nutrition, growing pig 21
- Protein, ¹⁵N-labelled *Chlorella*, metabolism and nutritive value, rat 411
- Protein, requirements, growing lamb 45
- Protein, requirements, ruminant calf 113
- Protein, rumen metabolism, relationship to urinary aromatic acid excretion, fed and fasted sheep 251
- Protein, supplement, effect of rumen bypass on concentrate intake, sheep 361
- Protein-energy malnutrition, circulation of 'big' insulin, child 345
- Protein-energy malnutrition, liver pathology, baby baboon 171
- Proteolytic activity development, abomasum and stomach, preruminant calf, rabbit, guinea-pig 285
- Proteolytic activity, stomach and pancreas, doe-suckled and hand-reared rabbit 351
- Pteroylmonoglutamic acid, dietary, response by low-birth-weight infant 165
- Rabbit 285, 351
- Rat 37, 107, 139, 157, 411, 425, 447, 511, 555
- Rate of passage, digesta, large intestine, effect of food intake, sheep 221
- Rate of passage, digesta, theoretical considerations and computer simulation, sheep 377
- Rate of passage, markers, biological relevance of rate-constants, sheep 313
- Rate of passage, water and dry matter, variation within gastrointestinal tract, sheep 231
- Requirements, methionine + cystine, growing pig 437
- Requirements, protein, growing lamb 45
- Requirements, protein, ruminant calf 113
- Rumen, differential rates of passage, water and dry matter, sheep 231
- Rumen, propionate, gluconeogenesis, effect of plane of nutrition and pregnancy, sheep 475
- Rumen, protein metabolism, relationship to urinary aromatic acid excretion, fed and fasted sheep 251
- Rumen bypass, dietary protein and energy supplements, effect on concentrate intake, sheep 361
- Rumen contents, in vitro fermentation patterns, effect of methane inhibitors, molasses diet, sheep 369
- Saccobranhus fossilis* freshwater fish, conversion of lutein to dehydroretinol 1
- Salmonella typhi-murium* infection, susceptibility, effects of oxytetracycline, rat 157
- Selenite, [⁷⁵Se], metabolism, rat 139

- Selenium, metabolism, rat 139
 Selenium balance, young New Zealand women 195
 Selenomethionine, [⁷⁵Se], metabolism, rat 139
 Serum, folate concentration, effect of oral pteroylmonoglutamic acid, low-birth-weight infant 165
 Sheep *see also* Lamb
 Sheep 87, 95, 221, 231, 251, 313, 361, 369, 377, 451, 475, 529, 537
 Simulation, rate of passage of digesta, sheep 377
 Sodium, absorption, large intestine, effect of food intake, sheep 221
 Sodium, excretion, effects of exercise and food intake, hot climate, man 127
 Stomach, proteolytic activity, doe-suckled and hand-reared rabbit 351
 Stomach, proteolytic activity development, rabbit, guinea-pig 285
 Sugar(s) *see also* Galactose, Glucose, Lactose
 Sulphur, digestion and utilization, forage diets, sheep 537
 Sulphur, tissue content and secretion in milk, sheep 529
 Surgery, effect on rate of passage of markers, sheep 321
- Technique, analytical, bound nicotinic acid, wheat bran 297
 Technique(s), calcium and phosphorus metabolism, comparison of four methods, rat 425
 Technique, lutein extraction, cow dung 2
 Technique, total body water measurement by deuterium oxide, pig 149
 Temperature, chronic hyperthermia, effect on lipid metabolism, British and Zebu calves 211
 Temperature, environmental, effect on energy and protein metabolism, growing pig 21
 Temperature, environmental, relationship between exercise and mineral excretion, man 127
- Theoretical models, rate of passage of digesta, sheep 377
 Thiamin pyrophosphate, stimulation of erythrocyte transketolase activity, pig 391
 Thiamin status, relationship to transketolase activity, pig 391
 Threonine-fortified rice, nutritive value, Indian child 241
 Thyroid iodine metabolism, action of cassava, rat 511
 Tiredness, effect of intramuscular injection of vitamin B₁₂, man 277
 Transketolase activity, erythrocytes, relationship to thiamin status, pig 391
- Valine, catabolism, effect of excess leucine, chick 501
 Vitamin(s) *see also* Carotene, Dehydroretinol, Lutein, Nicotinic acid, Pterolymonoglutamic acid, Thiamin
 Vitamin B₁₂, intramuscular injection, effect in treatment of tiredness, man 277
 Vitamin B₁₂ deficiency, relationship to histidine catabolism, iron-deficient rat 447
- Water, absorption, large intestine, effect of food intake, sheep 221
 Water, total body space, measurement by deuterium oxide, pig 149
 Water balance, effect of exercise and food intake, hot climate, man 127
 Weaning, effect on small intestine motility, calf 491
 Weaning, traditional diet, relationship between energy, linoleic acid and kwashiorkor, Nigerian child 567
 Wool, sulphur content, sheep 529
- Zinc balance, young New Zealand women 195
 Zinc deficiency, food intake regulation, rat 555