

## Subject Index

- Alcohol dehydrogenase polymorphism in  
*Bromus mollis*, maintenance of 545  
*Aspergillus ficuum*, properties of the partially  
 purified inositol phosphate phosphatases  
 of 361
- Bacillus popilliae* var. *rhopaea*, a new variety  
 of milky disease, from *Rhopaea*  
*verreauxi* 235
- Bandicoot, genetic variation and immuno-  
 chemical properties of L-malate : NAD<sup>+</sup>  
 oxidoreductase isozymes in 677
- Boar:  
 Semen, amino acid compositions of 415  
 Semen, frozen, fertility after surgical  
 insemination with 499  
 Spermatozoa, effect of composition of  
 tris-based diluent on survival of,  
 following deep freezing 485
- Boophilus microplus*, characterization of the  
 organophosphorus-resistant Mt Alford,  
 Gracemere and Silkwood strains of 397
- Broad bean stain virus in South Australia,  
 occurrence and properties 341
- Bromus mollis*, maintenance of alcohol  
 dehydrogenase polymorphism in 545
- Bufo marinus*, see Queensland cane toad
- Bull semen, amino acid composition of 415
- Calves of *Bos indicus* crossbred and *Bos*  
*taurus*, leucocyte values in 1-6-day-old, in  
 a tropical environment 133
- Carbohydrate of egg-white ovomucin, studies  
 on 349
- Cattle:  
 Amino acid composition of bull semen and  
 the secretions of the male reproductive  
 tract 415  
 Concentrations of lipids in the adrenal  
 cortical tissue of genetically different  
 types 651  
 Leucocyte values in 1-6-day-old calves of  
*Bos indicus* crossbred and *Bos taurus* in  
 a tropical environment 133  
 Survey of methionine adenosyltransferase  
 and cystathionine  $\gamma$ -lyase activities in  
 cattle tissues 465
- Cattle tick, see *Boophilus microplus*
- Cellulase production by *Lenzites trabea* and  
*Polyporus versicolor*, influence of  
 carbohydrate accessibility on 457
- Chlorpromazine, mutagenesis by  
 photoactivation of 231
- Concanavalin A, a conformational  
 transition in; conformational differences  
 between intact and fragmented units 1
- Corrigendum 284
- Corticosteroid, plasma, diurnal patterns of,  
 in fed and fasted sheep 167
- Cystathionine  $\gamma$ -lyase activities in ruminant  
 tissues, survey of 465
- DDT, mutagenicity of, in mice, *Drosophila*  
*melanogaster* and *Neurospora crassa* 427
- Desulfovibrio gigas*, reduction of sulphite to  
 sulphide catalysed by desulfovibrinidin  
 from 7
- Desulfovibrinidin from *Desulfovibrio gigas*,  
 reduction of sulphite to sulphide catalysed  
 by 7
- Diabetes, alloxan-induced, liver as the site of  
 carnitine biosynthesis in sheep with 645
- Dihydrotestosterone:  
 Effects on lysosomal enzyme activity in the  
 testis of the hypophysectomized rat 59  
 Effects on spermatogenesis in the  
 hypophysectomized rat 47  
 Effects on testicular-specific lactate  
 dehydrogenase activity in the  
 hypophysectomized rat 267
- Dromaius novae-hollandiae*, see emu
- Drosophila melanogaster*:  
 A quantitative method for analysing  
 competition where individuals cannot  
 be identified 183  
 Average dominance of abdominal bristle  
 polygenes in 683  
 Changes in the genetic correlation during  
 two-trait selection 89  
 Correlated responses of different *scute*  
 genotypes to long-term selection for  
 increased abdominal bristle number  
 in 205  
 Genetic architecture of resistance to  
 desiccation in populations of 441  
 Mutagenicity of DDT in 427  
 Phenogenetics of a super-suppressor  
 in. IV 305  
 Prediction of responses in single-trait and  
 two-trait selection in 75
- Drosophila*, nature of quantitative genetic  
 selection in. II 683
- Drosophila simulans*, genetic architecture of  
 resistance to desiccation in populations  
 of 441
- Drosophila* sternite bristle patterns, some  
 quantitative features of 533
- Echidna, amino acid sequence of  
 haemoglobin-IA of 111
- Editorial ix
- Emu egg yolk, amino acid sequence of  
 apovitellenin I from the low-density  
 lipoprotein of 15

*Escherichia coli*:

Characterization and intragenic position of mutations in the gene for galactoside permease of 331

Genetic and enzymatic experiments relating to the quaternary structure of  $\beta$ -galactosidase in 321

Mutation spectra and the neutrality of mutations 309

Refractile granular inclusions in a temperature-sensitive mutant of 575

## Ewe:

Fertilization in, following multiple ovulation and uterine insemination 301

Infertility in, caused by prolonged grazing on oestrogenic pastures 409

Ovariectomized, effect of progesterone and oestrogen on the survival and development of fertilized ova in 511

Pregnant, factors that affect the measurement of plasma progesterone concentrations in 659

## FSH:

Effects on lysosomal enzyme activity in the testis of the hypophysectomized rat 59

Effects on spermatogenesis in the hypophysectomized rat 47

Effects on testicular-specific lactate dehydrogenase activity in the hypophysectomized rat 267

Levels of, in pituitaries and plasma of lambs selected for and against multiple births 293

$\beta$ -Galactosidase, genetic and enzymatic experiments relating to the quaternary structure of 321

Galactoside permease of *Escherichia coli*, gene for, characterization and intragenic position of mutations in 331

## Genetics:

A quantitative method for analysing competition where individuals cannot be identified 183

Changes in the genetic correlation during two-trait selection 89

Mutation spectra and the neutrality of mutations 309

Prediction of responses in single-trait and in two-trait selection 75

Goat tissues, survey of methionine adenosyltransferase and cystathionine  $\gamma$ -lyase activities in 465

## Growth hormone:

Diurnal patterns of, in plasma of fed and fasted sheep 167

Early changes in plasma levels after feeding in lambs and adult sheep 157

Haemoglobin-IA of echidna, amino acid sequence of 111

Haemoglobin from the platypus, amino acid sequence of  $\alpha$ -chain 591

Haemoglobins of the Port Jackson shark 607

*Heterodontus portusjacksoni*, see Port Jackson shark

Human semen, amino acid composition of 415

## Insulin:

Diurnal patterns of, in plasma of fed and fasted sheep 167

Early changes in plasma levels after feeding in lambs and adult sheep 157

*Isodon macrourus*, see bandicoot

Keratin from silver gull feather, amino acid sequence of 369

$\beta$ -Lactoglobulin, bovine, hydrogen-deuterium exchange in the genetic variants A, B and C of 473

## Lambs:

Early changes in plasma insulin and growth hormone levels after feeding in 157

Primordial follicle numbers in ovaries and levels of LH and FSH in pituitaries and plasma of lambs selected for and against multiple births 293

Some biochemical features of white muscle disease in, and the influence of selenium 633

*Larus novae-hollandiae*, see silver gull

*Lenzites trabea*, influence of carbohydrate accessibility on cellulase production by 457

## LH:

Effects on lysosomal enzyme activity in the testis of the hypophysectomized rat 59

Effects on spermatogenesis in the hypophysectomized rat 47

Effects on testicular-specific lactate dehydrogenase activity in the hypophysectomized rat 267

Levels of, in pituitaries and plasma of lambs selected for and against multiple births 293

- Malate dehydrogenase isozymes in *Isoodon macrourus*, genetic variation and immunochemical properties 677
- L-Malate : NAD<sup>+</sup> oxidoreductase isozymes in *Isoodon macrourus*, genetic variation and immunochemical properties 677
- Marsupial mole, chromosomes and systematic position of 529
- Methionine adenosyltransferase activities in ruminant tissues, survey of 465
- Milky disease, a new variety of, from *Rhopaea verreauxi* 235
- Mouse:
- Behaviour of two-sex groups at 4, 21 and 33°C 479
  - Effects of genotype and nutrition before mating on the reproductive performance of 39
  - Further studies on the accumulation of energy substrates by two-cell embryos 519
  - Growth at 23 and 32°C, genetic influences on 197
  - Mutagenicity of DDT in 427
  - Some *in vivo* and *in vitro* interactions of oestrogen sulphates with the uterus and vagina 147
  - Some *in vivo* interactions of oestradiol with the vagina 285
- Neurospora crassa*:
- A histidine-3 mutant in, due to an interchange 219
  - A second locus subject to recombination control by the *rec-1*<sup>+</sup> gene in 561
  - Mutagenicity of DDT in 427
- Notoryctes typhlops*, see marsupial mole
- Oestradiol:
- Some *in vivo* interactions of, with mouse vagina 285
  - Tritiated, uptake and metabolism of, by rabbit uterine tissue *in vitro* 137
- Oestrogen, effect of, on the survival and development of fertilized ova in the ovariectomized ewe 511
- Oestrogen sulphates, some *in vivo* and *in vitro* interactions of, with mouse uterus and vagina 147
- Oestrone, tritiated, uptake and metabolism of, by rabbit uterine tissue *in vitro* 137
- Ornithorhynchus anatinus*, see platypus
- Ovomucin, studies on carbohydrate of 349
- Phosphatases, inositol phosphate, of *Aspergillus ficuum* 361
- Phosphogluconate dehydrogenase variants in the wild rabbit in Australia, geographical distribution and biochemical characterization of 671
- Pig:
- Amino acid composition of boar semen 415
  - Effect of composition of tris-based diluent on survival of boar spermatozoa following deep freezing 485
  - Fatty acid composition of ethanolamine and choline phosphoglycerides of testes 629
  - Fertility after surgical insemination with frozen boar semen 499
- Platypus, amino acid sequence of the  $\alpha$ -chain of haemoglobin from 591
- Polyporus versicolor*, influence of carbohydrate accessibility on cellulase production by 457
- Port Jackson shark, haemoglobins of 607
- Progesterone:
- Effect on survival and development of fertilized ova in the ovariectomized ewe 511
  - Factors that affect the measurement of, in plasma of pregnant ewes 659
- Protein:
- Amino acid sequence of apovitellenin I from the low-density lipoprotein of emu egg yolk 15
  - Covalent binding of fluorescent whitening agents to, during irradiation by sunlight 23
  - Monotreme, studies on. IV, V 111, 591
  - Type I tyrosine-rich proteins of Merino wool, macroheterogeneity of 617
  - Tyrosine-rich proteins of wool, factors influencing the biosynthesis of 31
- Queensland cane toad, translation of rabbit haemoglobin mRNA in oocytes of 585
- Rabbit:
- Acute biochemical response of starved liver to glucose infusion *in situ* 249
  - Ecological genetics of wild rabbit in Australia. I 671
  - Haemoglobin mRNA, translation of, in oocytes of *Bufo marinus* 585
  - Hormonal requirements for implantation and pregnancy in ovariectomized rabbit 275
  - Uptake and metabolism of tritiated 17 $\beta$ -oestradiol and oestrone by uterine tissue *in vitro* 137

## Ram:

- Amino acid composition of semen 415
- Effect of protein and energy content of diet on rate of sperm production 67
- Fertility following inseminations with frozen-thawed reconcentrated and unconcentrated semen 423

## Rat:

- Amino acid composition of semen 415
- Effects of FSH, LH, testosterone and dihydrotestosterone on lysosomal enzyme activity in testis of hypophysectomized rat 59
- Effects of FSH, LH, testosterone and dihydrotestosterone on testicular-specific lactate dehydrogenase activity in hypophysectomized rat 267
- Quantitative effects of FSH, LH, testosterone and dihydrotestosterone on spermatogenesis in hypophysectomized rat 47
- Studies in testicular function. I, II, III 47, 59, 267
- Survey of methionine adenosyltransferase and cystathionine  $\gamma$ -lyase activities in rat tissues 465

*Rhopaea verreauxi*, a new variety of milky disease from 235

mRNA, rabbit haemoglobin, translation of, in oocytes of *Bufo marinus* 585

*Salmonella typhimurium*, mutagenesis in, by photoactivation of chlorpromazine 231

*Schizophyllum commune*, variation in recombination frequencies in, and its genetic control 103

Selenium, influence of, on white muscle disease in lambs 633

Shark, Port Jackson, haemoglobins of 607

## Sheep:

- Amino acid composition of ram semen and the secretions of the male reproductive tract 415
- Attempts to produce identical offspring in, by mechanical division of the ovum 505
- Delay in the onset of thermal tachypnoea in shorn sheep exposed to 42°C in winter and summer 259
- Diurnal patterns of plasma insulin, growth hormone, corticosteroid and metabolite concentrations in fed and fasted sheep 167
- Early changes in plasma insulin and growth hormone levels after feeding in lambs and adult sheep 157
- Effect of progesterone and oestrogen on the survival and development of fertilized ova in the ovariectomized ewe 511

Effect of protein and energy content of the diet on the rate of sperm production in rams 67

Fatty acid composition of ethanolamine and choline phosphoglycerides of testes 629

Fertility following inseminations with frozen-thawed reconcentrated and unconcentrated ram semen 423

Fertilization in the ewe following multiple ovulation and uterine insemination 301

Infertility in ewes caused by prolonged grazing on oestrogenic pastures 409

Liver as the site of carnitine biosynthesis in sheep with alloxan-induced diabetes 645

Primordial follicle numbers in ovaries and levels of LH and FSH in pituitaries and plasma of lambs selected for and against multiple births 293

Selected factors that affect the measurement of plasma progesterone concentrations in pregnant ewes 659

Some biochemical features of white muscle disease in lambs, and the influence of selenium 633

Survey of methionine adenosyltransferase and cystathionine  $\gamma$ -lyase activities in sheep tissues 465

Silver gull, amino acid sequence of feather keratin from 369

*Tachyglossus aculeatus aculeatus*, see echidna

## Testosterone:

- Effects on lysosomal enzyme activity in the testis of the hypophysectomized rat 59
- Effects on spermatogenesis in the hypophysectomized rat 47
- Effects on testicular-specific lactate dehydrogenase activity in the hypophysectomized rat 267

Virus, broad bean stain, in South Australia, occurrence and properties of 341

Wheat endosperm, a water-soluble arabinogalactan-peptide from 117

White muscle disease in lambs, some biochemical features of, and influence of selenium 633

## Wool:

- Factors influencing the biosynthesis of tyrosine-rich proteins of 31
- Merino, macroheterogeneity of type I tyrosine-rich proteins of 617
- Studies on cortical cells and macrofibrils 383