

AUTHOR INDEX

- AGASHE, B. D., see OERTEL, G. W. 1
- ALLEN, F. W., see HALL, J. B. 163
- BELL, D., see GRAY, E. D. 111
- BERGMANN, F., H. UNGAR AND A. KALMUS
(Enzymic oxidation of 2-chloropurine) 49
- CANELLAKIS, E. S. AND E. HERBERT
(s-RNA synthesis. II. Assay and
method of purification of s-RNA α , β
and γ) 133
- CROCKER, T. T., see GOLDSTEIN, L. 82
- DAVIDSON, J. N., see GRAY, E. D. 111
- DAVIES, J. W. AND G. HARRIS
(Yeast peptidyl-nucleotides. Isolation
of dinucleotide derivatives including
alanyl-(3'-[5'-adenylyl])5'-
uridylylate) 28
- DAVIES, J. W. AND G. HARRIS
(Dynamic aspects of peptidyl-nucleotide
pool of brewer's yeast during
growth) 39
- DRAKULIĆ, M., S. ŠMIT AND S. STAVRIĆ
(Biosynthesis of acid-soluble nucleic
acid precursors in u.v.-irradiated and
chloramphenicol-treated *E. coli* B) 77
- GOLDSTEIN, L., J. MICOU AND T. T. CROCKER
(Nuclear-cytoplasmic relationships in
human cells in tissue culture. IV. Aspects
of nucleic acid and protein metabolism
in enucleate cells) 82
- GRAY, E. D., S. M. WEISSMAN, J. RICHARDS,
D. BELL, H. M. KEIR, R. M. S. SMELLIE
AND J. N. DAVIDSON
(Biosynthesis of DNA by extracts of
mammalian cells. V. Factors interfering
with biosynthesis) 111
- HALL, J. B. AND F. W. ALLEN
(Biosynthesis of 5-ribosyluracil phosphate
in *N. crassa* 36601) 163
- HANSON, K. R., J. KASTOR AND R. RENDI
(Lability of rat-liver microsomes and
ribonucleoprotein particles) 192
- HAROLD, F. M.
(Accumulation of inorganic polyphosphate
in mutants of *N. crassa*) 172
- HARRIS, G., see DAVIES, J. W. 28, 39
- HERBERT, E., see CANELLAKIS, E. S. 133
- HOTCHKISS, R. D., see LACKS, S. 155
- HULTIN, T., see VON DER DECKEN, A. 139
- HUPPERT, J. AND N. REBEYROTTE
(Extraction d'une acide desoxyribonucléique
transformant par le dodécyl sulfate de sodium
et le phénol) 189
- KALMUS, A., see BERGMANN, F. 49
- KASTOR, J., see HANSON, K. R. 192
- KEIR, H. M., see GRAY, E. D. 111
- KYOGOKU, Y., see SHIMANOUCI, T. 195
- LACKS, S. AND R. D. HOTCHKISS
(Formation of amylomaltase after genetic
transformation of pneumococcus) 155
- LARK, K. G.
Mechanism regulating periodic DNA
synthesis in synchronized cultures of
Alcaligenes fecalis) 121
- MICOU, J., see GOLDSTEIN, L. 82
- MILES, H. T.
(Infrared spectra of three-stranded
helices formed by polyuridylic acid
with polyadenylic acid and with tetra-
adenylic acid) 196
- NISHIMURA, S.
(Extracellular ribonucleases from *B. subtilis*.
I. Crystallization and specificity) 15
- OERTEL, G. W. AND B. D. AGASHE
(Steroid nucleotides. II. Synthesis of
 Δ^5 -3 β -hydroxy-steroid nucleotides) 1
- PARDEE, A. B., see RUSHIZKY, G. W. 70
- PAUL, J., see WEISSMAN, S. M. 101
- PERETTA, M., see THOMSON, R. Y. 87
- PRESTIDGE, L. S., see RUSHIZKY, G. W. 70
- REBEYROTTE, N., see HUPPERT, J. 189
- RENDI, R., see HANSON, K. R. 192
- RICCERI, G., see THOMSON, R. Y. 87
- RICHARDS, J., see GRAY, E. D. 111
- RILEY, M., see RUSHIZKY, G. W. 70
- RUSHIZKY, G. W., M. RILEY, L. S. PRESTIDGE
AND A. B. PARDEE
(Inactivation of enzyme formation by
u.v.-light. I. Action spectra and size of
sensitive unit) 70
- SEKIGUCHI, M., A. TAKETO AND Y. TAKAGI
(Infective DNA from bacteriophage ϕ X174)
. 199
- SHIMANOUCI, T., M. TSUBOI, Y. KYOGOKU
AND I. WATANABE
(The 1680 cm^{-1} band of RNA in D_2O
solutions) 195
- SMELLIE, R. M. S., see WEISSMAN, S. M. 101
- SMELLIE, R. M. S., see GRAY, E. D. 111
- ŠMIT, S., see DRAKULIĆ, M. 77
- STAVRIĆ, S., see DRAKULIĆ, M. 77
- TAKAGI, Y., see SEKIGUCHI, M. 199
- TAKETO, A., see SEKIGUCHI, M. 199
- THOMSON, R. Y., G. RICCERI AND M. PERETTA
(Nucleic acid metabolism of animal
cells *in vitro*. III. Factors influencing
nucleotide biosynthesis) 87
- TSUBOI, M., see SHIMANOUCI, T. 195
- UNGAR, H., see BERGMANN, F. 49
- VAN LANCKER, J. L.
(Metabolic alterations after total body

- doses of X-radiation. I. Role of regenerating liver nuclei and cytoplasm in inhibition due to X-radiation of incorporation of [^3H]thymidine into DNA) 57
- VAN LANCKER, J. L.
(Metabolic alterations after total body doses of X-radiation. II. Incorporation of deoxycytidylic and thymidylic acid into purified DNA and nuclei in presence of regenerating-liver supernatant) 63
- VON DER DECKEN, A. AND T. HULTIN
(Activity of rat liver enzymes in transfer of s-RNA-bound amino acids to protein by ribonucleoprotein particles) 139
- WANG, T-Y.
(Globulin of calf thymus nuclei and *in vitro* incorporation of [^{14}C]adenosinetriphosphate into globulin-RNA) 8
- WATANABE, I., see SHIMANOUCHI, T. 195
- WEISSMAN, S. M., R. M. S. SMELLIE AND J. PAUL
(Biosynthesis of DNA by extracts of mammalian cells. IV. Phosphorylation of thymidine) 101
- WEISSMAN, S. M., see GRAY, E. D. 111
- YU, C-T. AND P. C. ZAMECNIK
(Hydrolytic procedure for ribonucleosides and its possible application to sequential degradation of RNA) 148
- ZAMECNIK, P. C., see YU, C-T. 148

SUBJECT INDEX

- [^{14}C]Adenosinetriphosphate, globulin of calf thymus nuclei, *in vitro* incorporation of — into globulin-RNA (WANG) 8
- Adenylic acid, infrared spectra of three-stranded helices formed by polyuridylic acid with poly — and with tetra — (TODD MILES) 196
- Alanyl-(3'-[5'-adenylyl])-5'-uridylylate, yeast peptidylnucleotidates, isolation of dinucleotide derivatives including — (DAVIES, HARRIS) 28
- Alcaligenes fecalis*, mechanism regulating periodic DNA synthesis in synchronized cultures of —, studies (LARK) 121
- Amino acids, activity of rat-liver enzymes in transfer of s-RNA-bound — to protein by ribonucleoprotein particles (VON DER DECKEN, HULTIN) 139
- Amylomaltase, formation, after genetic transformation of pneumococcus (LACKS, HOTCHKISS) 155
- Bacillus subtilis*, extra-cellular ribonucleases from —, crystallization and specificity (NISHIMURA) 15
- Bacteriophage ϕX174 , infective deoxyribonucleic acid from — (SEKIGUCHI, TAKETO, TAKAGI) 199
- Cells, enucleate —, some aspects of nucleic acid and protein metabolism in — study (GOLDSTEIN, MICOU, CROCKER) 82
- Cells, human, nuclear-cytoplasmic relationships in — in tissue culture, some aspects of nucleic acid and protein metabolism in enucleate cells, study (GOLDSTEIN, MICOU, CROCKER) 82
- Cells, mammalian, biosynthesis of deoxyribonucleic acid, by extracts of —, factors interfering with biosynthesis, studies (GRAY, WEISSMAN, RICHARDS, BELL, KEIR, SMELLIE, DAVIDSON) 111
- Cells, mammalian, biosynthesis of deoxyribonucleic acid by extracts of —, phosphorylation of thymidine, studies (WEISSMAN, SMELLIE, PAUL) 101
- Chloramphenicol-treated and u.v.-irradiated *Escherichia coli* B, biosynthesis of acid-soluble nucleic acid precursors in — (DRAKULIĆ, ŠMIT, STAVRIĆ) 77
- 2-Chloropurine, enzymic oxidation (BERGMANN, UNGAR, KALMUS) 49
- Cytoplasm, role of regenerating liver nuclei and — in inhibition due to X-radiation of incorporation of tritium-labeled thymidine into DNA (VAN LANCKER) 57
- Deoxycytidylic acid, incorporation of — and thymidylic acid into purified DNA and nuclei in presence of regenerating-liver supernatant (VAN LANCKER) 63
- Deoxyribonucleic acid, see Nucleic acid
- Deoxyribonucleic acid, *Pneumococcus*-transforming, extraction by means of dodecyl sulphate and phenol (HUPPERT, REBEYROTTE) 189
- Dinucleotide, yeast peptidylnucleotidates, isolation of — derivatives including alanyl-(3'-[5'-adenylyl])-5'-uridylylate (DAVIES, HARRIS) 28
- Dodecyl sulphate, use in extraction of DNA (HUPPERT, REBEYROTTE) 189
- Enzyme formation, inactivation, by ultraviolet light, action spectra and size of sensitive unit (RUSHIZKY, RILEY, PRESIDGE, PARDEE) 70
- Enzymic oxidation, of 2-chloropurine (BERGMANN, UNGAR, KALMUS) 49
- Escherichia coli* B, biosynthesis of acid-soluble nucleic acid precursors in u.v.-irradiated and chloramphenicol-treated — (DRAKULIĆ, ŠMIT, STAVRIĆ) 77
- Escherichia coli*, see Enzyme formation
- Globulin, of calf thymus nuclei, *in vitro*

- incorporation of [^{14}C]adenosinetriphosphate into globulin-RNA (WANG) . . . 8
- Helices, infrared spectra of three-stranded — formed by polyuridylic acid with polyadenylic acid and with tetraadenylic acid (TODD MILES) . . . 196
- u.v.-Irradiated and chloramphenicol-treated *Escherichia coli* B, biosynthesis of acidsoluble nucleic acid precursors in — (DRAKULIĆ, ŠMIT, STAVRIĆ) . . 77
- Liver, lability of rat — microsomes and ribonucleoprotein particles (HANSON, KASTOR, RENDI) . . . 192
- Liver, rat —, enzymes, activity in transfer of s-RNA-bound amino acids to protein by ribonucleoprotein particles (VON DER DECKEN, HULTIN) . . . 139
- Liver, rat, incorporation of deoxycytidylic and thymidylic acid into purified DNA and nuclei in presence of regenerating — supernatant (VAN LANCKER) . . . 63
- Liver, rat, role of regenerating — nuclei and cytoplasm in inhibition due to X-radiation of incorporation of tritium-labeled thymidine into DNA (VAN LANCKER) . . . 57
- Metabolic alterations, after total body doses of X-radiation, incorporation of deoxycytidylic and thymidylic acid into purified DNA and nuclei in presence of regenerating-liver supernatant (VAN LANCKER) . . . 63
- Metabolic alterations, after total body doses of X-radiation, role of regenerating liver nuclei and cytoplasm in inhibition due to X-radiation of incorporation of tritium-labeled thymidine into DNA (VAN LANCKER) . . . 57
- Metabolism, some aspects of nucleic acid and protein — in enucleate cells, study (GOLDSTEIN, MICOU, CROCKER) . . 82
- Microsomes, lability of rat-liver — and ribonucleoprotein particles (HANSON, KASTOR, RENDI) . . . 192
- Neurospora crassa*, accumulation of inorganic polyphosphate in mutants of — (HAROLD) . . . 172
- Neurospora crassa* 36601, biosynthesis of 5-ribosyluracilphosphate in —, studies (HALL, ALLEN) . . . 163
- Nuclear-cytoplasmic relationships in human cells in tissue culture, some aspects of nucleic acid and protein metabolism in enucleate cells (GOLDSTEIN, MICOU, CROCKER) . . . 82
- Nucleases, ribo —, extracellular — from *Bacillus subtilis*, crystallization and specificity (NISHIMURA) . . . 15
- Nucleic acid metabolism, of animal cells *in vitro*, factors influencing nucleotide biosynthesis (THOMSON, RICCI, PERETTA) . . . 87
- Nucleic acid precursors, biosynthesis of acid-soluble —, in u.v.-irradiated and chloramphenicol-treated *Escherichia coli* B (DRAKULIĆ, ŠMIT, STAVRIĆ) . . 77
- Nucleic acid, some aspects of — and protein metabolism in enucleate cells, study (GOLDSTEIN, MICOU, CROCKER) . . 82
- Nucleic acid, deoxyribo —, biosynthesis of — by extracts of mammalian cells, factors interfering with biosynthesis, studies (GRAY, WEISSMAN, RICHARDS, BELL, KEIR, SMELLIE, DAVIDSON) . . . 111
- Nucleic acid, deoxyribo —, biosynthesis of — by extracts of mammalian cells, phosphorylation of thymidine, studies (WEISSMAN, SMELLIE, PAUL) . . . 101
- Nucleic acid, deoxyribo —, incorporation of deoxycytidylic and thymidylic acid into purified — and nuclei in presence of regenerating-liver supernatant (VAN LANCKER) . . . 63
- Nucleic acid, deoxyribo —, infective — from bacteriophage ϕX174 (SEKIGUCHI, TAKETO, TAKAGI) . . . 199
- Nucleic acid, deoxyribo —, mechanism regulating periodic — synthesis in synchronized cultures of *Alcaligenes fecalis*, studies (LARK) . . . 121
- Nucleic acid, deoxyribo —, role of regenerating liver nucleic and cytoplasm in inhibition due to X-radiation of incorporation of tritium-labeled thymidine into — (VAN LANCKER) . . . 57
- Nucleic acid, ribo —, globulin of calf thymus nuclei, *in vitro* incorporation of [^{14}C]adenosinetriphosphate into globulin — (WANG) . . . 8
- Nucleic acid, ribo —, hydrolytic procedure for ribonucleosides, possible application to sequential degradation of — (YU, ZAMECNIK) . . . 148
- Nucleic acid, ribo —, the 1680 cm^{-1} band of — in D_2O solutions (SHIMANOUCHI, TSUBOI, KYOGOKU, WATANABE) . . . 195
- Nucleic acid, soluble ribo —, activity of rat-liver enzymes in transfer of — bound amino acids to protein by ribonucleoprotein particles (VON DER DECKEN, HULTIN) . . . 139
- Nucleic acid, soluble ribo —, synthesis, assay and method of purification of — α , β and γ , studies (CANELLAKIS, HERBERT) . . . 133
- Nuclei, globulin of calf thymus —, *in vitro* incorporation of [^{14}C]adenosinetriphosphate into globulin-RNA (WANG) . . . 8
- Nuclei, role of regenerating liver — and cytoplasm in inhibition due to X-radiation of incorporation of tritium-labeled thymidine into DNA (VAN LANCKER) . . 57
- Nucleoprotein, ribo —, activity of rat-liver enzymes in transfer of s-RNA-bound amino acids to protein by —

- particles (VON DER DECKEN, HULTIN) 139
- Nucleoprotein, ribo —, lability of rat-liver microsomes and — particles (HANSON, KASTOR, RENDI) 192
- Nucleosides, ribo —, hydrolytic procedure for —, possible application to sequential degradation of RNA (YU, ZAMECNIK) 148
- Nucleotide, peptidyl — pool of brewer's yeast during growth, dynamic aspects (DAVIES, HARRIS) 39
- Nucleotides, yeast peptidyl —, isolation of dinucleotide derivatives including alanyl-(3'-[5'-adenylyl])-5'-uridylylate (DAVIES, HARRIS) 28
- Nucleotide biosynthesis, nucleic acid metabolism of animal cells *in vitro*, factors influencing — (THOMSON, RICCERI, PERETTA) 87
- Nucleotides, steroid —, synthesis of Δ^8 - 3β -hydroxy-steroid nucleotides (OERTEL, AGASHE) 1
- Peptidyl-nucleotides, see Nucleotide
- Phenol, use in extraction of DNA (HUPPERT, REBEYROTTE) 189
- Phosphorylation, of thymidine, biosynthesis of deoxyribonucleic acid by extracts of mammalian cells, studies (WEISSMAN, SMELLIE, PAUL) 101
- Pneumococcus, formation of amylomaltase after genetic transformation of — (LACKS, HOTCHKISS) 155
- Polyphosphate, accumulation of inorganic — in mutants of *Neurospora crassa* (HAROLD) 172
- Polyuridylic acid, infrared spectra of three-stranded helices formed by — with polyadenylic acid and with tetraadenylic acid (TODD MILES) 196
- Protein, activity of rat-liver enzymes in transfer of s-RNA-bound amino acids to — by ribonucleo — particles (VON DER DECKEN, HULTIN) 139
- Protein, some aspects of nucleic acid and — metabolism in enucleate cells, study (GOLDSTEIN, MICOU, CROCKER) 82
- X-Radiation, incorporation of deoxycytidylic and thymidylic acid into purified DNA and nuclei in presence of regenerating-liver supernatant, metabolic alterations after — (VAN LANCKER) 63
- X-Radiation, role of regenerating liver nuclei and cytoplasm in inhibition due to — of incorporation of tritium-labeled thymidine into DNA (VAN LANCKER) 57
- Ribonuclease, see Nuclease
- Ribonucleic acid, see Nucleic acid
- 5-Ribosyluracilphosphate, biosynthesis, in *Neurospora crassa* 36601, studies (HALL, ALLEN) 163
- Saccharomyces cerevisiae*, see Yeast, brewer's
- Spectra, inactivation of enzyme formation by ultraviolet light, action — and size unit (RUSHIZKY, RILEY, PRESTIDGE, PARDEE) 70
- Spectra, infrared, of three-stranded helices formed by polyuridylic acid with polyadenylic acid and with tetraadenylic acid (TODD MILES) 196
- Steroid nucleotides, synthesis of Δ^8 - 3β -hydroxysteroid nucleotides (OERTEL, AGASHE) 1
- Thymidine, tritium-labeled, role of regenerating liver nuclei and cytoplasm in inhibition due to X-radiation of incorporation of — into DNA (VAN LANCKER) 57
- Thymidylic acid, incorporation of deoxycytidylic acid and — into purified DNA and nuclei in presence of regenerating-liver supernatant (VAN LANCKER) 63
- Thymus, calf, globulin of — nuclei, *in vitro* incorporation of [14 C]adenosine-triphosphate into globulin-RNA (WANG) 8
- Ultraviolet light, inactivation of enzyme formation by —, action spectra and size of sensitive unit (RUSHIZKY, RILEY, PRESTIDGE, PARDEE) 70
- Uracil, see 5-Ribosyluracilphosphate
- Yeast, brewer's, dynamic aspects of peptidyl-nucleotide pool of — during growth (DAVIES, HARRIS) 39
- Yeast, peptidyl-nucleotides, isolation of dinucleotide derivatives including alanyl-(3'-[5'-adenylyl])-5'-uridylylate (DAVIES, HARRIS) 28