

INDEX

A

- Acetylcholinesterase, diethylphosphoryl (WILSON), 60
- Actinomycin, biosynthesis, highly labeled (KATZ), 107
- Adenosine, analog, effects on nucleotide metabolism (ELLIS), 231
- Adenosine-3',5'-phosphate levels in heart, effect of epinephrine (ROBISON), 168
- Adipose tissue lipolysis, effect of insulin (FROESCH), 280
- Albumin, serum, binding of sulfonamides (JARDETZKY), 214
- Amino acid(s), α -aminoisobutyric acid uptake by rat liver (CHAMBERS), 66
metabolism, effects of barbital (GOLDSTEIN), 31
- Antibiotics, aminoglycosides, misreading of RNA codewords caused by (DAVIES), 93
polyene, interaction with mitochondria (KINSKY), 190
- Antimicrobial agents, effects on RNA polymerase (WARING), 1
- ARNESON, V. G. *See* SZYBALSKI, W., 202
- Ascites tumor cells, inhibition of nucleotide metabolism (ELLIS), 231
- AYLING, J. E. AND E. KUN. Studies with specific enzyme inhibitors. X. Mechanism of Action of L-(+)- β -monofluorolactate of crystalline heart muscle lactate dehydrogenase, 255
- 8-Azaguanine, inhibition of protein synthesis (ZIMMERMAN), 113
on mRNA in *B. cereus* (GRÜNBERGER), 157

B

- Bacillus cereus*, azaguanine effects on mRNA (GRÜNBERGER), 157
- Bacillus subtilis*, inhibition of RNA synthesis by miracil D (WEINSTEIN), 297
- Bacteria, metabolism of mitomycin (SZYBALSKI), 202
- BALLY, P. *See* FROESCH, E. R., 280
- Barbital, effects on amino acid metabolism (GOLDSTEIN), 31
- BASS, A. D. *See* CHAMBERS, J. W., 66
- Benzeneboronic acids, brain and tumor tissue, localization rates (HANSCH), 87
- BERLIN, C. M. AND R. T. SCHIMKE. Influence of turnover rates on the responses of enzymes to cortisone, 149
- Brain, localization of benzeneboronic acids (HANSCH), 87
- BURCHALL, J. J. AND G. H. HITCHINGS. Inhibitor binding analysis of dihydrofolate reductases from various species, 126

- BÜRGI, H. *See* FROESCH, E. R., 280
- BUTCHER, R. W. *See* ROBISON, G. A., 168
- BYINGTON, K. H. AND K. C. LEIBMAN. Metabolism of trichloroethylene in liver microsomes. II. Identification of the reaction product as chloral hydrate, 247

C

- CHA, C. J. M., *See* CHA, S., 178
- CHA, S. AND C. J. M. CHA. Kinetics of cyclic enzyme systems, 178
- CHAMBERS, J. W., R. H. GEORG AND A. D. BASS. Effect of hydrocortisone and insulin on uptake of α -aminoisobutyric acid by isolated perfused rat liver, 66
- CHERNOFF, R. *See* WEINSTEIN, I. B., 297
- Chloral hydrate, product of trichloroethylene metabolism (BYINGTON), 247; (LEIBMAN), 239
- Cholinesterase inhibitors, molecular orbital calculations (NEELY), 137
- Coding, misreading caused by antibiotics (DAVIES), 93
- CONNEY, A. H. *See* KUNTZMAN, R., 163
- Correlation of localization rates, benzeneboronic acids in brain and tumor (HANSCH), 87
- Cortisone, responses of rat liver enzymes (BERLIN), 149
- Cyclic AMP levels in heart, epinephrine effect (ROBISON), 168
- Cyclic enzyme systems, kinetics (CHA), 178

D

- DAVIES, J., L. GORINI AND B. D. DAVIS. Misreading of RNA codewords induced by aminoglycoside antibiotics, 93
- DAVIS, B. D. *See* DAVIES, J., 93
- DEUTSCH, E. W. *See* HANSCH, C., 205
- Diethylphosphofluoridate, inhibition of acetylcholinesterase, reactivation (WILSON), 60
- Dihydrofolate reductases, drug inhibition of (BURCHALL), 126
- Dogs, liver microsomes, metabolism of trichloroethylene (LEIBMAN), 239
- Dose-response relationship, competitive and functional synergism (GERO), 312

E

- ELLIS, D. B. AND G. A. LEPAGE. Some inhibitory effects of 9- β -D-xylofuranosyladenine, an adenosine analog, on nucleotide metabolism in ascites tumor cells, 231
- Enzymes, cyclic systems, kinetics (CHA), 178
induction and turnover rates in rat liver (BERLIN), 149

- Epinephrine, effect on cyclic AMP levels in heart (ROBISON), 168
- Erythrocytes, diffusion of sulfonamides (HOLDER), 266
- Escherichia coli*, barbitol on amino acid metabolism (GOLDSTEIN), 31
- K12, streptomycin-dependence and insensitivity to valine (POLGLASE), 109
- Ethers, aryl-alkyl, cleavage by liver microsomes (RENSON), 145
- F**
- FINKELSTEIN, I. See WEINSTEIN, I. B., 297
- Fluorinated pyrimidines, inhibition of thymidylate synthetase (REYES), 14
- Fluorolactate, inhibitor of lactate dehydrogenase (AYLING), 255
- Free energy of hydrolysis of diethylphosphoryl acetylcholinesterase (WILSON), 60
- FROESCH, E. R., H. BÜRGI, P. BALLY AND A. LABHART. Inhibition of spontaneous adipose tissue lipolysis by insulin and effects on fructose and glucose metabolism, 280
- Fructose, insulin on metabolism by adipose tissue (FROESCH), 280
- G**
- GEORG, R. H. See CHAMBERS, J. W., 66
- GERO, A. Graphic differentiation between competitive and functional synergism, 312
- Glucose, insulin on metabolism by adipose tissue (FROESCH), 280
- Glucose, oxidation by neurohypophysial neurons (KRASS), 306
- Glutathione, -organic nitrate reductase in rats (NEEDLEMAN), 77
- Glyceryl trinitrate metabolism in rats (NEEDLEMAN), 77
- GOLDSTEIN, D. B. Effects of barbitol on amino acid metabolism in *Escherichia coli*, 31
- GORINI, L. See DAVIES, J., 93
- GREENBERG, S. A. See ZIMMERMAN, E. F., 113
- GRONAU, G. R. See KINSKY, S. C., 190
- Growth hormone, pituitary, hydrolysis (LI), 47
- GRÜNBERGER, D. AND H. G. MANDEL. Enhanced messenger activity of RNA from 8-azaguanine-treated *Bacillus cereus*, 157
- H**
- HANSCH, C., A. R. STEWARD AND J. IWASA. The correlation of localization rates of benzeneboronic acids in brain and tumor tissue with substituent constants, 87
- HANSCH, C., A. R. STEWARD, J. IWASA AND E. W. DEUTSCH. The use of a hydrophobic bonding constant for structure-activity correlations, 205
- HAYES, S. L. See HOLDER, L. B., 266
- Heart, cyclic AMP levels in epinephrine effect (ROBISON), 168
- hog, lactate dehydrogenase (AYLING), 255
- phosphofructokinase (WAKID), 53
- HEIDELBERGER, C. See REYES, P., 14
- HeLa cells, effects of azaguanine (ZIMMERMAN), 113
- HIRSCHBERG, E. See WEINSTEIN, I. B., 297
- HITCHINGS, G. H. See BURCHALL, J. J., 126
- HOLDER, L. B. AND S. L. HAYES. Diffusion of sulfonamides in aqueous buffers and into red cells, 266
- Hormones, neurohypophysis, glucose oxidation (KRASS), 306
- Hormones, steroids, hydroxylation by microsomes (KUNTZMAN), 163
- Human cell cultures, metabolism of mitomycin (SZYBALSKI), 202
- HUNTER, F. E., JR. See NEEDLEMAN, P., 77
- Hydrocortisone, and insulin on AIB uptake by rat liver (CHAMBERS), 66
- Hydrophobic bonding constant, and structure-activity correlations (HANSCH), 205
- Hydroxylation of steroid hormones and drugs by microsomes (KUNTZMAN), 163
- I**
- Inhibitor binding analysis of dihydrofolate reductase (BURCHALL), 126
- Insulin, effect on adipose tissue lipolysis (FROESCH), 280
- Insulin, and hydrocortisone on AIB uptake by rat liver (CHAMBERS), 66
- IWASA, J. See HANSCH, C., 87, 205
- J**
- JARDETZKY, O. AND N. G. WADE-JARDETZKY. On the mechanism of the binding of sulfonamides to bovine serum albumin, 214
- K**
- KATZ, E., A. B. MAUGER AND H. WEISSBACH. Biosynthesis of highly labeled actinomycins, 107
- Kinetics of cyclic enzyme systems (CHA), 178
- KINSKY, S. C., G. R. GRONAU AND M. M. WEBER. Interaction of polyene antibiotics with subcellular membrane systems. I. Mitochondria, 190
- KRASS, M. E. AND F. S. LABELLA. Oxidation of ¹⁴C-1- and ¹⁴C-6-glucose by hormone-synthesizing and hormone-secreting portions of neurohypophysial neurons, 306
- KUN, E. See AYLING, J. E., 255
- KUNTZMAN, R., D. LAWRENCE AND A. H. CONNEY. Michaelis constants for the hydroxylation of steroid hormones and drugs by rat liver microsomes, 163

L

- LABELLA, F. S. *See* KRASS, M. E., 306
 LABHART, A. *See* FROESCH, E. R., 280
 Lactate dehydrogenase, hog heart, inhibition by fluorolactate (AYLING), 255
 LAWRENCE, D. *See* KUNTZMAN, R., 163
 LEIBMAN, K. C. Metabolism of trichloroethylene in liver microsomes. I. Characteristics of the reaction, 239
 LEIBMAN, K. C. *See* BYINGTON, K. H., 247
 LEPAGE, G. A. *See* ELLIS, D. B., 231
 LI, C. H. AND G. SAMUELSSON. Human pituitary growth hormone. XI. Rate of hydrolysis by trypsin, chymotrypsin, and pepsin; effect of trypsin on the biological activity, 47
 Lipolysis, inhibition by insulin (FROESCH), 280
 Liver microsomes, rabbit, oxidation of ethers (RENSON), 145
 rat, metabolism of trichloroethylene (BYINGTON), 247; (LEIBMAN), 239
 microsomal hydroxylation of steroids and drugs (KUNTZMAN), 163
 uptake of AIB and effects of hormones (CHAMBERS), 66

M

- MANDEL, H. G. *See* GRÜNBERGER, D., 157
 MANSOUR, T. E. *See* WAKID, N., 53
 MAUGER, A. B. *See* KATZ, E., 107
 Membrane systems, subcellular, interaction of polyene antibiotics (KINSKY), 190
 Metabolism, hydroxylation of steroids and drugs (KUNTZMAN), 163
 of nucleotides, inhibition of (ELLIS), 231
 oxidative cleavage of ethers by liver microsomes (RENSON), 145
 of trichloroethylene in rat liver microsomes (BYINGTON), 247; (LEIBMAN), 239
 Microsomes, rat liver, hydroxylation of steroids and drugs (KUNTZMAN), 163
 metabolism of trichloroethylene (BYINGTON), 247; (LEIBMAN), 239
 Microsomes, rabbit liver, oxidation of ethers (RENSON), 145
 Miracil D, inhibitor of RNA synthesis in *B. subtilis* (WEINSTEIN), 297
 Misreading of RNA codewords induced by antibiotics (DAVIES), 93
 Mitochondria, interaction of polyene antibiotics (KINSKY), 190
 Mitomycin, reductive activation and inactivation (SZYBALSKI), 202
 Molecular orbital calculations, correlation with structure and activity (NEELY), 137
 L-(+)- β -Monofluorolactate, effect on heart lactate dehydrogenase (AYLING), 255
 MORGAN, H. E. *See* ROBISON, G. A., 168

N

- NEEDLEMAN, P. AND F. E. HUNTER, JR. The transformation of glyceryl trinitrate and other nitrates by glutathione-organic nitrate reductase, 77
 NEELY, W. B. The use of molecular orbital calculations as an aid to correlate the structure and activity of cholinesterase inhibitors, 137.
 Neurohypophysial neurons, hormone synthesis and secretion (KRASS), 306
 Neurons, neurohypophysial, oxidation of glucose (KRASS), 306
 Nitrates, metabolism in rats (NEEDLEMAN), 77
 Nucleotide metabolism in ascites tumor cells, inhibition of (ELLIS), 231
 Nucleotides, fluorinated, inhibition of thymidylate synthetase (REYES), 14

O

- Oxidative cleavage of ethers by liver microsomes (RENSON), 145
 ØYE, I. *See* ROBISON, G. A., 168

P

- Phosphofructokinase from heart, stability of (WAKID), 53
 Pituitary growth hormone, hydrolysis (LI), 47
 POLGLASE, W. J. Insensitivity to valine of streptomycin-dependent *Escherichia coli* K12, 109
 Polyene antibiotics, interaction with mitochondria (KINSKY), 190
 Protein synthesis, inhibition by azaguanine (ZIMMERMAN), 113
 misreading of codewords caused by antibiotics (DAVIES), 93
 Proteins, binding of sulfonamides (HOLDER), 266
 Pyrimidines, fluorinated, inhibition of thymidylate synthetase (REYES), 14

R

- Rabbits, liver microsomes, metabolism of trichloroethylene (LEIBMAN), 239
 Rat, heart, cyclic AMP levels, effect of epinephrine (ROBISON), 168
 liver, uptake of AIB and effects of hormones (CHAMBERS), 66
 liver microsomes, hydroxylation of steroids and drugs (KUNTZMAN), 163
 Receptors, synergism, competitive and functional (GERO), 312
 Reductive activation and inactivation of mitomycin (SZYBALSKI), 202
 RENSON, J., H. WEISSBACH AND S. UDENFRIEND. On the mechanism of oxidative cleavage of arylalkyl ethers by liver microsomes, 145
 REYES, P. AND C. HEIDELBERGER. Fluorinated

- Pyrimidines. XXVI. Mammalian thymidylate synthetase: Its mechanism of action and inhibition by fluorinated nucleotides, 14
- Ribosomes, effects of azaguanine on polyribosomes in HeLa cells (ZIMMERMAN), 113
- RIO, R. A. *See* WILSON, I. B., 60
- RNA, antimicrobial agents on polymerase (WARING), 1
- codewords, misreading induced by antibiotics (DAVIES), 93
- messenger, azaguanine effects (GRÜNBERGER), 157
- synthesis, *B. subtilis*, inhibition by miracil D (WEINSTEIN), 297
- ROBISON, G. A., R. W. BUTCHER, I. ØYE, H. E. MORGAN AND E. W. SUTHERLAND. The effect of epinephrine on adenosine-3',5'-phosphate levels in the isolated perfused rat heart, 168
- S**
- SAMUELSSON, G. *See* LI, C. H., 47
- SCHIMKE, R. T. *See* BERLIN, C. M., 149
- Steroids and drugs, hydroxylation by rat liver microsomes (KUNTZMAN), 163
- STEWART, A. R. *See* HANSCH, C., 81, 205
- Streptomycin, dependence, insensitivity to valine in *E. coli* (POLGLASE), 109
- misreading of RNA codewords (DAVIES), 93
- Structure-activity relationship, and molecular orbital calculations (NEELY), 137
- use of hydrophobic bonding constant (HANSCH), 205
- Substituent constants, and localization rates of benzenboronic acids (HANSCH), 87
- Sulfonamides, binding to serum albumin (JARDETZKY), 214
- diffusion in buffers and into red cells (HOLDER), 266
- SUTHERLAND, E. W. *See* ROBISON, G. A., 168
- Synergism, graphic differentiation between competitive and functional (GERO), 312
- SZYBALSKI, W. AND V. G. ARNESON. Reductive activation and inactivation of mitomycin as studied with human and bacterial cell cultures, 202
- T**
- Thymidylate synthetase, inhibition by fluorinated nucleotides (REYES), 14
- Trichloroethylene, metabolism in rat liver microsomes (BYINGTON), 247; (LEIBMAN), 239
- Tumor cells, ascites, inhibition of nucleotide metabolism (ELLIS), 231
- Tumor tissue, localization of benzenboronic acids (HANSCH), 87
- U**
- UDENFRIEND, S. *See* RENSON, J., 145
- V**
- Valine, insensitivity, streptomycin-dependent *E. coli* (POLGLASE), 109
- W**
- WADE-JARDETZKY, N. G. *See* JARDETZKY, O., 214
- WAKID, N. AND T. E. MANSOUR. Factors influencing the stability of heart phosphofruktokinase, 53
- WARING, M. J. The effects of antimicrobial agents on ribonucleic acid polymerase, 1
- WEBER, M. M. *See* KINSKY, S. C., 190
- WEINSTEIN, I. B., R. CHERNOFF, I. FINKELSTEIN AND E. HIRSCHBERG. Miracil D: An inhibitor of ribonucleic acid synthesis in *Bacillus subtilis*, 297
- WEISSBACH, H. *See* KATZ, E., 107
- WEISSBACH, H. *See* RENSON, J., 145
- WILSON, I. B. AND R. A. RIO. The free energy of hydrolysis of diethylphosphoryl acetylcholinesterase, 60
- X**
- 9- β -D-Xylofuranosyladenine, effects on nucleotide metabolism in tumor cells (ELLIS), 231
- Xylosyl adenine, inhibitor of nucleotide metabolism (ELLIS), 231
- Z**
- ZIMMERMAN, E. F. AND S. A. GREENBERG. Inhibition of protein synthesis by 8-azaguanine. I. Effects on polyribosomes in HeLa cells, 113