AUTHOR INDEX

Aarons, Leon, 127
Abdel-Monem, Mahmoud, M., 734
Abdel-Monem, Mahmoud M., 82
Abou-Donia, Mohamed B., 779
Abraham, Donald J., 305
Adams, Louis, 37
Addison, R. F., 44
Adedoyin, Adedayo, 127
Adelmann, Annette M., 760
Agosin, Moises, 200
Alexander, Donald P., 731
Allerheilligen, Sandra R. B., 794
Alvin, John D., 305
Amoh, Kwame, 734
Andersson, P., 403, 412
Ando, Hidehiro, 262
Ankley, Gerald T., 200
Applewhite, J., 233
Ayrton, A., 312

Babish, John G., 676
Bahnson, L. S., 491
Bailie, M. B., 729
Baillie, Thomas A., 300
Baker, Max T., 499
Balis, Frank M., 595
Barbhaiya, Rashmi, 808
Barrett, W. E., 846
Bates, James N., 499
Beierschmitt, William P., 270
Bekersky, I., 429
Bertault-Peres, Pierre, 384, 391
Berzins, R., 12
Bevan, David R., 442
Bhargava, Madhu M., 184, 504
Birkett, D. J., 256
Bodey, Sr., Gerald P., 329
Bon, M., 897
Bonfils, Claude, 391
Bories, G. F., 925
Brady, John F., 648
Branch, R. A., 277
Brasch, Robert C., 155
Breimer, D. D., 418
Breyer-Pfaff, Ursula, 857, 868
Broder, Samuel, 595
Brzeznicka, Elzbieta A., 133
Buckpitt, A. R., 491
Budinsky, Robert A., 37
Buhler, Donald R., 32
Bulger, William H., 786
Burak, Eric, 274
Burgess, W., 256
Burk, Raymond F., 794
Burka, L. T., 367
Burka, Leo T., 91, 478
Burke, Alison B., 581
Burke, M. D., 74
Busby, M., 204

Caldwell, John, 587
Campbell, Monica E., 237
Cano, Jean-Paul, 384, 391
Carney, John M., 295
Cary, P. D., 682
Castagnoli, Jr., N., 485, 491
Cederbaum, Arthur I., 634
Cerniglia, Carl E., 97
Chanoine, F., 846
Chaplin, M. D., 565, 571
Chen, Lee J., 725
Chenery, R. J., 312
Cho, Arthur K., 648
Cho, Diane K., 618
Chow, Samson A., 740
Christensen, H. Dix, 295
Chui, Y. C., 44
Ciaccio, Paul J., 882
Climie, Jeanette M., 318
Coats, Eugene A., 37
Cochran, D., 921
Colburn, W. A., 429
Combs, Daniel, 618
Coon, Minor J., 59
Cooney, David A., 595
Corley, David G., 816
Corpet, D. E., 925
Couch, M. W., 233
Coyle, Dennis E., 136
Cresteil, T., 524

Decker, Richard W., 760
Dekant, Wolfgang, 702
de Lannoy, Inés A. M., 51
Denson, Donald D., 136
DePierre, Joseph W., 114
Dewey, Richard H., 161
Dills, Russell L., 281
DiStefano, Emma W., 648
Dokko, Joon, 648
Dolce, K., 729
Duggan, Daniel E., 212
Duignan, David B., 882
Dulik, Deanne M., 767, 195, 473
Dykstra, Thomas P., 177

Eckardt, Regina D., 161
Edsbäcker, S., 403, 412
Ehrsson, Hans, 399
El Mouelhi, Mohamed, 767
Engineer, Meher S., 329
Eriksson, Ulf G., 155

Fabre, Gérard, 384, 391
Fabre, Isabelle, 384
Farmer, P. B., 682
Farquhar, D., 773
Federowicz, D. A., 729
Federowicz, Debra Ann, 274
Feierman, Dennis E., 634
Feil, V. J., 841, 671
Felder, T. B., 773
Fenselau, Catherine, 767, 195, 473
Fentiman, A. F., 846
Ferdinandi, E. S., 921
Fischer, Lawrence J., 740
Forgue, S. Thomas, 808
Franklin, Michael R., 335, 731
Freeman, Corinne J., 267
Fujita, Valerie S., 59
Fullerton, Floyd R., 602
Futaguchi, S., 426

Galinsky, Raymond E., 731
Gallenberg, Lori A., 363
Gallick Whitaker, N. G., 107
Gedamke, R., 921
Gerber, Nicholas, 318
Ghanayem, Burhan, I., 478
Ghanayem, Burhan I., 91
Gillette, J. R., 349
Gleason, John G., 161, 168
Goddard, Kathryn A., 449
Goodwin, R. Michael, 640
Gordon, W. Perry, 589
Goyer, R., 846
Graham, D. J. M., 565, 571
Grant, Denis M., 237
Gray, M., 12
Gray, Murray R., 17, 22, 27
Grech-Bélanger, Odette, 122
Greenman, David L., 602
Grenot, C., 846
Griffeth, Landis K., 749
Grover, P. L., 682
Guard, Charles L., 676

Hakimi, J., 429
Hall, D. J., 565
Hall, P. de la M., 256
Halpert, James R., 877, 882
Hama, K. M., 565
Hanano, Manabu, 138, 540
Hansen, Jr., Eugene B., 97
Harigaya, Shoichi, 852, 262
Hartman, N. R., 661
Harvey, D. J., 914
Hassan, Moustapha, 399
Hazelton, George A., 133
Hecht, Stephen G., 318
Heflich, Robert H., 97
Hein, David W., 68
Heitz, F., 377
Hendrickx, J., 905
Henschler, Dietrich, 702
Hess, Evelyn V., 37
Heykants, J., 905
Hill, D. L., 207
Hirobe, Masaaki, 583
Ho, Dah-Hsi W., 329
Hoag, M. K. P., 485
Hoffmann, Jean S., 718
Hollenberg, Paul F., 518
Honma, Seijiro, 551
Horie, Tohru, 560
Horning, E. C., 890
Horning, M. G., 1, 890
Houston, J. Brian, 127, 710
Howell, Stanley R., 281
Hu, Henry S.-W., 300
Huang, Bee-Lian, 618
Huckle, Keith R., 581
Huitric, Alain C., 589
Hunter, Andrea, 289
Hurkmans, R., 905
Hutson, David H., 581

Iga, Tatsuji, 138, 540
Ikenishi, Y., 426
Inaba, Tadanobu, 237
Ioannou, Y. M., 367
Iwamura, Satoshi, 551
Iwatani, K., 426

Jamali, Fakhreddin, 250
James, Margaret O., 665
Jansson, Ingela, 344
Jardine, I., 661
Johns, David G., 595
Jollow, David J., 143
Jones, A. D., 491
Jones, A. Daniel, 608
Juedes, Marlene J., 786
Jung, D., 151
Junien, J. L., 846
Just, Sylvaine, 384, 391

Kahn, C., 729
Kalin, Jack R., 207
Kalir, A., 485
Kalow, Werner, 237
Kanakubo, Yoshio, 560
Kane, Robert E., 725
Kari, Prasad, 808
Kau, Donald, 640
Kawabe, Yoshihiro, 551
Kedzierski, Bogdan, 32
Keefer, Larry K., 300
Kelley, James A., 595
Kelly, Daniel W., 460
Khalique, Abdul, 627
Kirby, R., 312
Kirlin, Ward G., 68
Kitada, Mitsukazu, 560
Klaassen, Curtis D., 133, 281
Knupp, Catherine A., 816
Kobayashi, Reiko, 551
Kobayashi, Tsutomu, 852, 262
Kochak, Gregory M., 456
Koenig, J. A., 256
Koike, M., 426
Korfmacher, Walter A., 97
Kuemmerle, Steven C., 518
Kuo, George Y., 168
Kupfer, David, 786
Kurz, L., 565

Landi, M. S., 729
Lau, Serrine S., 801, 437
Laudenschlager, Wade G., 833
Lauwers, W., 905

Law, F. C. P., 44
LeBoeuf, Elizabeth, 122
Lee, Frank W., 618
Leff, Susan V., 499
Legha, S. S., 773
Lemoine, A., 524
Leonard, Thomas B., 161
Leroux, J. P., 524
Lertratanangkoon, K., 1, 890
Lesko, L. J., 204
Leung, Louis Y., 300
Levine, Walter G., 504
Liberato, D. J., 349
Lin, Jiunn H., 212
Lin, Tsu-Han, 138
Lindberg, C., 403, 412
Lindstrom, T. D., 107
Litterst, Charles L., 595
Liu, A. L., 579
Liu, Li-Ling, 432
Logan, Lance, 295
Lopez, A., 897
Los, Layne E., 212
Lu, K., 773
Ludden, Thomas M., 794
Lundgren, Bo, 114
Lynn, Robert K., 168

Maddox, Michael L., 618
Magat, Welsonia J., 760
Malejka-Giganti, Danuta, 760
Malet-Martino, M. C., 897
Malet-Martino, Marie C., 718
Malkinson, Alvin M., 833
Marriage, H. J., 914
Martens, Gisela, 702
Martino, R., 897
Martino, Robert, 718
Mastovich, Susan L., 833
Masumoto, Hiroshi, 583
Matthews, H. B., 367, 478
Maurel, Patrick, 384, 391
Maurer, G., 377
Mays, Dennis C., 318
McCarthy, Mary E., 161, 168
McClanahan, Robert H., 589
McKay, S., 682
McLean, M. A., 773
McMahon, Timoth F., 270
McManus, M. E., 256
McPhillips, D. Munsell, 207
Mead, Elliot W., 833
Mehendale, Harihara M., 189, 511
Mehvar, Reza, 250
Meijer, Johan, 114
Melder, D. C., 826
Metzler, Manfred, 702
Meuldermans, W., 905
Mico, B. A., 729
Mico, Bruce A., 274
Millburn, Peter, 581
Miller, Dwight W., 97
Miller, Marion G., 143
Miller, Natalie E., 877
Mistry, M., 710
Monks, Terrence J., 801, 437
Montgomery, P. R., 12
Moore, D. J., 826
Moorman, M. P., 367
Mroszczak, Edward J., 618
Mulvey, J. H., 571
Myers, Jane A., 136

Nadkarni, Mohan, 595
Nakagawa, Y., 426
Nakamura, Mitsutaka, 295
Nakamura, Yutaka, 529, 535
Nelson, S. D., 491
Nelson, Sidney D., 589
Newman, R. A., 773
Newman, Robert A., 329
Newton, John F., 161, 168
Nixon, J. R., 846
Nomeir, Amin A., 779
Norikura, R., 426
Norman, S. J., 312
Nystrom, Debra D., 821

Ogolla, Frederick, 68
Ohta, Shigeru, 583
Okita, R. T., 233
Oldham, H. G., 312
Olson, James R., 653
Omura, Tsuneo, 560

Pacula, Christine M., 318
Pandey, Ramendra N., 518
Pang, K. Sandy, 51
Parandoosh, Zahra, 59
Paulson, G. D., 841, 671
Paulson, J., 403
Peffer, Richard C., 305
Peggins, James O., 270
Perchonock, Carl D., 161, 168
Perry, William C., 300
Philpot, Richard M., 59
Politowski, J. F., 579
Poplack, David G., 595
Powis, G., 826
Pris, Jacques, 718
Pritchard, John B., 665
Prox, A., 857, 868

Rakhit, Ashok, 456
Ramsdell, Howard S., 32
Rao, Shrinivas B., 189
Rauckman, Elmer J., 749
Reinke, Lester A., 295
Remmel, Rory P., 734
Rickert, Douglas E., 821
Ridgewell, Richard E., 82
Rikans, Lora E., 356
Ritschel, Wolfgang A., 136
Ritter, Joseph K., 335
Roberts, Stephen M., 37
Rosen, Gerald M., 749
Roth, Jeri S., 595
Rouer, E., 524
Rouet, P., 524
Ruelius, Hans W., 767
Rush, W. R., 571
Russel, Frans G. M., 695
Ryrfeldt, Å., 403, 412

Salhab, A. S., 233
Samuels, Audrey R., 184
Sanders, J. M., 367, 478
Santone, K. S., 826
Sarnquist, Frank H., 618
Sasame, H. A., 349
Sato, Hitoshi, 540
Saville, Bradley A., 17, 22
Sawada, Yasufumi, 138, 540
Schäfer-Kortin, M., 374
Schenkman, John B., 344
Schmucker, Douglas L., 225
Schreier, E., 377
Schullek, Kathleen M., 833
Schultz, R. Jack, 449
Schwark, Wayne S., 676
Seddon, T., 312
Segall, H. J., 608
Sellier, N., 846
Seth, Cynthia L., 589
Shah, A., 151
Shah, R., 773
Sharp, Dale E., 318
Shen, Emily S., 653
Shibata, Kenyu, 551
Shively, Carol A., 217
Shiverick, K. T., 233
Shoaf, Susan E., 676
Sinsheimer, J. E., 267
Sisenwine, S. F., 579
Skelton, David, 250
Slikker, Jr., William, 460
Smith, S. A., 565, 571
Snyderwine, Elizabeth Green, 289
Somani, Satu M., 627
Spearman, Marshall E., 640
Srinivasan, Krishnapura, 504
Standring, P., 312
Stegeman, John J., 449
Stollman, Yacov R., 184
Straub, Kenneth M., 161, 168
Streeter, Anthony J., 300
Stupans, I., 256
Sugeno, K., 426
Sugihara, Juko, 852, 262
Sugiyama, Yuichi, 138, 540
Sultatos, Lester G., 613
Suwita, Elizabeth, 779
Suzuki, Yasuyuki, 138
Svensson, Craig K., 432
Swagzdis, James E., 274
Swanson, Steven P., 816
Sweetman, B. J., 277
Swysen, E., 905

Takeuchi, Kaoru, 583
Tam, Y. K., 12, 27
Tam, Yun K., 17, 22
Tempesta, Michael S., 816
Testa, Bernard, 587
Thalén, A., 403, 412
Theilmann, Lorenz, 184
Thijssen, J., 905
Thomas, L., 826
Thompson, Gary A., 136
Thompson, John A., 833
Thompson, R. M., 846
Timmerman, Ph., 905
Tio, C. O., 579
Tokes, Laszlo G., 618
Tozer, Thomas N., 155
Trevor, A. J., 485
Trinidad, Alma, 68
Turner, Patricia A., 136
Tweedie, D. J., 74

Ulm, Edgar H., 212
Unger, Steve E., 318

Vamvakas, Spyridon, 702
van der Gen, A., 418
van der Laan, W. L. J., 418
van Ginneken, Cess A. M., 695
van Hove, W., 418
van Meeteren-Wälchli, B., 418
Vesell, Elliot S., 217
Vestal, M. L., 773
Vialaneix, C., 897
Vialaneix, Jean P., 718
Vistica, David T., 595
Vodicnik, Mary Jo, 363

Wachsmuth, H., 857
Wagner, O., 377
Wand, Michael D., 833
Wang, Rose K., 225
Watkins, III, John B., 177
Watson, Michael W. B., 250
Wedlund, P. J., 277
Weiner, Myron, 270
Weyand, Eric H., 442
Wilke, T. J., 826
Wilkinson, G. R., 277
Winter, Carl K., 608
Woestenborghs, R., 905
Wolkoff, Allan W., 184
Wong, Lan K., 305
Wouterse, Alfons C., 695
Wu, Anne T., 618

Yamaguchi, T., 426
Yamaguchi, Toshiro, 529, 535
Yao, Peipei, 857
Yau, M., 12
Yeh, S. Y., 466
Yoshioka, Hidehumi, 560
Young, John F., 602
Young, Robert A., 511

Zemaitis, Michael A., 305
Zoetemelk, C. E. M., 418

SUBJECT INDEX

Acetaminophen
  hepatic and renal metabolism (minipigs), 270
  induced liver necrosis, sulfotransferase activity (hamsters), 143
  influence of gonadal hormones (rats), 725
  pharmacokinetics, vancomycin, antipyrine (swine), 729
Acetoxylauric acid, extraction, ω-1-hydroxylauric acids (rats, fish), 233
S-Acetylcoenzyme A, *N*-acetyltransferase and, *N*-acetylator genotype, extrahepatic expression (hamsters), 68
α_1-Acid glycoprotein, serum concentration, effect of surgery (rats), 138
Acrolein, oxidation, aldehyde dehydrogenases (rats), 356
Adenosine 3′-phosphate 5′-phosphosulfate, concentrations in tissues, different laboratory animals, 133
Adipocytes, 2,4,5,2′,4′,5′-hexachlorobiphenyl, disposition and elimination (rats), 363
Adrenal glands, perfusion studies, mitotane metabolism (dogs), 267
Aging
  effects, NADPH-cytochrome *c* reductase (monkeys), 225
  immature rats, radio-labeled carbon disulfide, metabolism and distribution, 289
  intrinsic clearance of bupivacine, reduction, cimetidine (rats), 136
Aldehyde dehydrogenases, acrolein oxidation (rats), 356
Alfentanil, sufentanil and, excretion, biotransformation (rats, dogs), 905
Alkyl halides, glutathione *S*-transferase-catalyzed, stereochemical aspects (rats), 82
Allyl alcohol, acrolein oxidation, aldehyde dehydrogenases (rats), 356
p-Aminobenzoic acid, *N*-acetylator genotype, extraheptic expression (hamsters), 68
1-Aminobenzotriazole, suicide substrate, *in vivo* inhibition, phenacetin oxidation (rats), 274
2-Aminofluorene, *p*-aminosalicyclic acid and, *N*-acetylator genotype, extrahepatic expression (hamsters), 68
Amiodarone, metabolism of, cytochrome P-450 (rats, rabbits), 511
Amitriptyline
  metabolites in human urine, 890
  nortriptyline and, phenolic metabolites, bile (rats, rabbits), 882
Amonafide, pharmacokinetics and metabolism (humans), 773
Analgesics, ketorolac tromethamine, pharmacokinetics (monkeys, mice, rats, rabbits, humans), 618
Antibodies, *see also* specific type
  comparison, chloroperoxidase, cytochrome P-450, 510
Anticonvulsants, nafimidone, disposition of (rats), 565
Antidepressants, phenolic metabolites, amitriptyline and nortriptyline, bile (rats, rabbits), 882
Antifungal agents, *N*-substituted imidazole drugs, hepatic drug metabolism, induction and inhibition (rats), 335
Antihistamines, pyrilamine maleate, microbial transformation, 97
Antihypertensive agents, quinpirole, disposition and biotransformation (mice, rats, dogs, monkeys), 107
Anti-inflammatory agents
  ketorolac tromethamine, pharmacokinetics (monkeys, mice, rats, rabbits, humans), 618
  major metabolites of tixocortol pivalate (humans), 868
Antiprotozoal drugs, cytosolic flavin-containing enzyme, conversion of *N,N*-dimethylaniline, *Trypanosoma cruzi*, 200
Antipyrine
  cimetidine inhibition of drug metabolism, plasma concentration-response (rats), 127
  elimination of, levamisole, dose- and time-dependent effect (rats), 432
  pharmacokinetics, acetaminophen, vancomycin (swine), 729
Antitumor drugs, pharmacokinetics and metabolism (humans), 773
Arachidonic acid, co-oxidation of 2-bromohydroquinone, renal prostaglandin synthase (rats), 801
Arene oxide, 4-chlorodiphenyl ether, pharmacokinetics, metabolism (rats), 44
Arylamines, *N*-acetylator genotype, extraheptic expression (hamsters), 68
2-Arylpropionic acids, enantioselective glucuronidation (humans, monkeys, rabbits), 767
Aspirin, deacetylation of diltiazem, liver (rats), 122
Assays, *see also* specific type
  ELISA, chloroperoxidase, cytochrome P-450, 510
Azo dye, metabolites, protein binding, nuclear translocation (rats), 504

Benoxaprofen, enantioselective glucuronidation (humans, monkeys, rabbits), 767
Benzo(*a*)pyrene
  disposition, species differences (rats, hamsters, guinea pigs), 442
  monooxygenase induction (fish), 449
Benzoic acid
  formation of taurine conjugate (fish), 581
  renal metabolism and excretion (fish), 665
BHT, *see* Butylated hydroxytoluene
Bile
  metabolism of azo dye, isolated perfused liver (rats), 184
  phenolic metabolites, amitriptyline and nortriptyline (rats, rabbits), 882
Biliary excretion, alterations, streptozotocin-induced diabetes (rats), 177
Bis-*p*-nitrophenylphosphate, deacetylation of diltiazem, liver (rats), 122
Blood
  formation, procainamide hydroxylamine, liver microsomes (humans, rats), 37
  skin suction blister fluid and, pharmacokinetics, griseofulvin (rats), 374
Blood flow, hepatic elimination, series-compartment model, 27
BMY-28142, *N*-oxidation of *N*-methylpyrrolidine (rats), 808
Bromobenzene
  conversion to 3-bromophenol (rats, guinea pigs), 857
  effects of model traumatic injury, hepatic drug metabolism (rats), 749
  metabolism (rats, guinea pigs), 1
2-Bromohydroquinone, co-oxidation, renal prostaglandin synthase (rats), 801
3-Bromophenol, conversion of bromobenzene (rats, guinea pigs), 857
Budesonide
  liver metabolism (rats, mice, humans), 403
  metabolic acetal splitting (rats, mice, humans), 412
Bupivacine, intrinsic clearance, reduction by cimetidine, influence of age (rats), 136
Buprenorphine, intestinal and hepatic conjugation (rats), 710
Busulfan, urinary metabolites (rats), 399
2-Butoxyethanol, metabolism and disposition (rats), 478
Butylated hydroxytoluene, oxidative metabolism, hepatic and pulmonary microsomes (rats, mice), 833
Butyrylcholinesterase, physostigmine, pharmacokinetics (rats), 627

Cadmium sulfate, deacetylation of diltiazem, liver (rats), 122
Caffeine, biotransformation, polycyclic aromatic hydrocarbons, cytochrome P-450 (humans), 237
Capillary membrane, radioiodinated human β-endorphin, physiological pharmacokinetics (rats), 540
Carbamate, reaction of α-fluoro-β-alanine, nuclear magnetic resonance, 897
β-Carbolines, harmine and harmol, metabolism, liver microsomes (mice), 74
Carbon dioxide, deuterium isotope effects, formaldehyde and formate metabolism (rats), 300
Carbon disulfide, radiolabeling, metabolism and distribution, immature rats, 289

Carcinogenesis
1-chloro- and 3-chloro-2-methylpropene, comparative metabolism, disposition (rats, mice), 91
N-acetylator genotype, extraheptic expression (hamsters), 68
Cefepime, *N*-oxidation of *N*-methylpyrrolidine (rats), 808
Chagas' disease, conversion of *N,N*-dimethylaniline, cytosolic flavin-containing enzyme, *Trypanosoma cruzi*, 200
Chloramphenicol
metabolism in human volunteer, 925
selective inactivation, phenobarbital-inducible isozyme, liver cytochrome P-450 (dogs), 852
theophylline and, pharmacokinetic interaction (rats), 204
Chloramphenicol analog, mechanism-based inactivation, β-naphthoflavone-inducible isozyme, cytochrome P-450 (rats), 846
Chlorodifluoroethene, microsomal metabolism, defluorination, cytochrome P-450 loss (rats), 499
1-Chloro-2,4-dinitrobenzene, conjugations of alkyl halides, glutathione *S*-transferase-catalyzed (rats), 82
4-Chlorodiphenyl ether, pharmacokinetics, metabolism (rats), 44
1-Chloro-2-methylpropene, 3-chloro-2-methylpropene and, comparative metabolism, disposition (rats, mice), 91
1-(2-Chlorophenyl)-1-(4-chlorophenyl)-2,2-dichlorethane, perfusion studies, mitotane metabolism, adrenal glands (dogs), 267
Chlorotrianisene, monooxygenase-mediated activation, covalent beinding, hepatic microsomal proteins (rats), 786
Cholinesterase, physostigmine, pharmacokinetics (rats), 627
Chromatography
gas, tetrahydrocannabinol metabolism (mice), 914
high-performance liquid
convenient procedure, pharmacokinetics of retinoids (mice), 207
cytochrome P-450, isozymes 2 and 5 (rabbits), 59
ibuprofen, dose-dependent pharmacokinetics (rats), 151
in vivo metabolism, SK&F 102,081 (guinea pigs), 168
microsomal metabolism, SK&F 102,081 (rats), 161
pyrrolizidine alkaloids, microsomal metabolism (rats), 32
Cimetidine
inhibition of drug metabolism, plasma concentration-response (rats), 127
reduction of bupivacaine, intrinsic clearance, influence of age (rats), 136
Cryopreservation, hepatocytes, xenobiotic metabolism and activation (rats, dogs), 826
Cunninghamella elegans, microbial transformation, pyrilamine maleate, 97
Cupric chloride, deacetylation of diltiazem, liver (rats), 122
Cyanamide, aldehyde dehydrogenases, acrolein oxidation (rats), 356
Cyclosporin A, metabolism (rabbits), 384, 391
Cyclosporine
disposition (rats), 377
effect on hepatic oxidative and conjugative metabolism (rats), 731
metabolites of, properties (rabbits), 661
Cyproheptadine
desmethylcyproheptadine and, metabolism and disposition, pregnant and fetal rats, 740
species-dependent glucuronidation, UDP-glucuronyltransferases (rabbits, monkeys, humans), 473
Cysteine, conversion of bromobenzene to 3-bromophenol (rats, guinea pigs), 857
Cytochrome b_5, deconvolution, P-450 stoichiometry, 344
Cytochrome P-448, hepatic drug metabolism, nafimidone, nafimidone alcohol (rats, mice), 571
Cytochrome P-450
bioactivation of tetrachloroethylene (rats), 702
comparison of chloroperoxidase and, 518
cyclosporin A metabolism (rabbits), 391
deconvolution, cytochrome b_5, stoichiometry, 344
flavin-containing monooxygenase, liver microsomes (humans), 256
formation, procainamide hydroxylamine, liver microsomes (humans, rats), 37
hepatic drug metabolism, *N*-substituted imidazole drugs, induction and inhibition (rats), 335
hepatic enzyme development, neonates (calves), 676
inactivation
β-naphthoflavone-inducible isozyme, chloramphenicol analog (rats), 846
phencyclidine iminium ion (rabbits), 485
induction of epoxide hydrolases, 2-ethylhexanoic acid, liver (mice), 114
isozymes 2 and 5, structure and inducibility, lung and liver (rabbits), 59
loss by microsomal metabolism, defluorination, fluoroethenes (rats), 499
mechanism-based inhibition, heterocyclic analogues, phencyclidine, 648
metabolism of amiodarone (rats, rabbits), 511
metabolism of imipramine, effects, diabetes (mice), 524
microsomal metabolism, SK&F 102,081 (rats), 161
monooxygenase-mediated activation, chlorotrianisene, covalent binding to microsomal proteins (rats), 786
monooxygenases in liver, *in vivo* and *in vitro* metabolism, theobromine (rats), 217
NADPH-cytochrome *c* reductase, effects of aging (monkeys), 225
naphthalene epoxidation, stereoselectivity (mice, rats, hamsters), 491
oxidation of pyrazole, 4-hydroxypyrazole, microsomes (rats), 634
pharmacokinetic interaction, theophylline, chloramphenicol (rats), 204
phenobarbital-inducible isozyme, selective inactivation, chloramphenicol (dogs), 852
polycyclic aromatic hydrocarbon-inducible, methylxanthine metabolism, liver microsomes (humans), 237
Cytosol, liver, azo dye metabolites, nuclear translocation (rats), 504

Deacetylation, diltiazem, liver (rats), 122
5′-Deoxy-5-fluorouridine, carbamate reaction, α-fluoro-β-alanine, nuclear magnetic resonance, 897
Desethylamiodarone, metabolism of amiodarone, cytochrome P-450 (rats, rabbits), 511
Desmethylcyproheptadine, cyproheptadine and, metabolism and disposition, pregnant and fetal rats, 740
Deuterium
isotope effects, formaldehyde and formate metabolism (rats), 300
liberation from piperidine ring, hydroxylation, roxatidine acetate hydrochloride (rats, dogs), 551
metabolic cleavage of furan ring, 877
Diabetes
genetic or chemically induced, effects, imipramine metabolism (mice), 524
streptozotocin-induced, alteration, biliary excretory function (rats), 177
cis-Diamminedichloroplatinum(II), induced nephrotoxicity, gentamicin pharmacokinetics (rats), 329
Diazepam, metabolism in cultured hepatocytes (rats, rabbits, dogs, guinea pigs, humans), 312
1,2-Dibromo-1-phenylethane, glutathione conjugation (rats), 418
3,4-Dichlorobenzylacetic acid, metabolism, taurine conjugate (rats), 305
2,6-Dichloro-4-nitrophenol, liver necrosis, acetaminophen-induced, sulfotransferase activity (hamsters), 143
2′,3′-Dideoxycytidine, disposition and metabolism (mice, monkeys), 595
Diffusion, effect of barriers, drug and metabolite kinetics, 51
Difluoroethene, microsomal metabolism, defluorination, cytochrome P-450 loss (rats), 499
Dihydrodiols
amitripyline metabolites in human urine, 890
methylthio analogs, bromobenzene metabolism (rats, guinea pigs), 1
6,7-Dihydro-7-hydroxy-1-hydroxymethyl-5H-pyrrolizine, pyrrolizidine alkaloids, microsomal metabolism (rats), 32
Dihydrotetrabenazine, pharmacoinetics (humans, rats), 250

1,2-Dihydro-2,2,4-trimethylquinoline, metabolism and disposition (rats), 367
Diltiazem, deacetylation, liver (rats), 122
2-(2-Dimethylaminoethyl)aminopyrine, pyrilamine and tripelennamine, *N*-debenzylation (rats), 466
2-[(2-Dimethylaminoethyl)(*p*-methoxybenzyl)amino]pyridine, metabolism of (rats), 460
N,N-Dimethylaniline, conversion to *N,N*-dimethylaniline-*N*-oxide, protozoan flavin monooxygenase, 200
2,5-Dimethylfuran, dermal dose of 2,5-hexandione, disposition, pharmacokinetics (hens), 779
N-(4,6-Dimethyl-2-pyrimidinyl)benzene[U-^{14}C]sulfonamide, disposition (rats), 671
Dinitrobenzenes, metabolism and excretion (rats), 821
Disulfiram
  aldehyde dehydrogenases, acrolein oxidation (rats), 356
  deacetylation of diltiazem, liver (rats), 122
5-(2-Dodecylphenyl)-4,6-dithianonanedioic acid
  in vivo metabolism (guinea pigs), 168
  microsomal metabolism (rats), 161
Dopamine agonist, quinpirole, disposition and biotransformation (mice, rats, dogs, monkeys), 107
Drug-drug interactions, theophylline and chloramphenicol (rats), 204

Enalaprilat, effect of diffusional barriers, drug and metabolite kinetics, 51
Enantiomers, composition of xenobiotics, criteria, 587
Enantioselectivity, glucuronidation, 2-arylpropionic acids (humans, monkeys, rabbits), 767
β-Endorphin, radioiodinated human, physiological pharmacokinetics (rats), 540
Epoxidation, naphthalene, stereoselectivity (mice, rats, hamsters), 491
Epoxide, tetrahydrocannabinol metabolism (mice), 914
Epoxide hydrolases
  cytosolic and microsomal, induction, 2-ethylhexanoic acid (mice), 114
  effects of model traumatic injury, hepatic drug metabolism (rats), 749
Eserine sulfate, deacetylation of diltiazem, liver (rats), 122
Estradiol, metabolism and disposition, diet, route of administration (mice), 602
Estrogen, acetaminophen sulfotransferase, influence of gonadal hormones (rats), 725
Ethanol, oxidation of pyrazole, 4-hydroxypyrazole, microsomes (rats), 634
7-Ethylbenz[*a*]anthracene, metabolism, liver microsomes (rats), 682
Ethyl 2-(4-chlorophenyl)-5-(2-furyl)-oxazole-4-acetate, metabolism, new hypolipidemic agent (rats, rabbits, dogs), 262
Ethylenediamine, metabolism of pyrilamine maleate (rats), 460
Ethylene glycol monobutyl ether, metabolism and disposition (rats), 478
2-Ethylhexanoic acid, induction, epoxide hydrolases, liver (mice), 114
Etodolac metabolite, 4-ureidoetodolac (mice, rats, dogs, humans), 921

Famotidine, urinary excretion kinetics (rats), 212
Fatty acids, extraction of ω-1-hydroxylauric acids, formation, acetoxy products (rats, fish), 233
Fentanyl analogues, alfentanil and sufentanil, excretion, biotransformation (rats, dogs), 905
Fetus, cyproheptadine and desmethylcyproheptadine, metabolism and disposition (rats), 740
Flavin
  enzymatic conversion, *N,N*-dimethylaniline, *Trypanosoma cruzi*, 200
  monooxygenase, liver microsomes (humans), 256
N-2-Fluorenylacetamide, metabolite profile in milk (rats), 760
α-Fluoro-β-alanine, carbamate reaction, nuclear magnetic resonance, 897
Fluorochloroethenes, microsomal metabolism, defluorination, cytochrome P-450 loss (rats), 499
5-Fluorocytosine metabolites, direct detection, human biofluids, nuclear magnetic resonance, 718
Fluoroethenes, microsomal metabolism, defluorination, cytochrome P-450 loss (rats), 499
6-Fluoro-2-methylspiro(chroman-4,4′-imidazolidine)-2′,5′-dione, inducer of monooxygenase, liver microsomes (rats), 560
Fluoropyrimidines, α-fluoro-β-alanine, carbamate reaction, nuclear magnetic resonance, 897
Forestomach, 1-chloro- and 3-chloro-2-methylpropene, comparative metabolism, disposition (rats, mice), 91
Formaldehyde, formate and, deuterium isotope effects (rats), 300
Furan, metabolic cleavage of ring, 877

Gastric acid, inhibition, famotidine, urinary excretion kinetics (rats), 212
Gentamicin, pharmacokinetics, cisplatin-induced nephrotoxicity (rats), 329
Glucocorticoids, topical, metabolic acetal splitting, budesonide (rats, mice, humans), 412
Glucuronic acid, *N*-(4,6-dimethyl-2-pyrimidinyl)benzene[U-^{14}C]sulfonamide, disposition (rats), 671
Glucuronidation
  enantioselective, 2-arylpropionic acids (humans, monkeys, rabbits), 767
  hepatic UDP-glucose and UDP-glucuronic acid, synthesis rates, reduced energy state (rats), 281
  in vivo metabolism, SK&F 102,081 (guinea pigs), 168
  metabolism of 2-phenylpropionic acid (rats), 529
  morphine, naloxone, buprenorphrine (rats), 710
  new hypolipidemic agent TA-1801, metabolism (rats, rabbits, dogs), 262
  species-dependent, UDP-glucuronyltransferases (rabbits, monkeys, humans), 473
Glutathione
  conjugate formation, propranolol (guinea pigs, rats), 349
  conjugation of 1,2-dibromo-1-phenylethane (rats), 418
  co-oxidation of 2-bromohydroquinone, renal prostaglandin synthase (rats), 801
  cytochrome P-450 monooxygenases in liver, *in vivo* and *in vitro* metabolism, theobromine (rats), 217
  distribution of *trans*-4-hydroxy-2-hexenal, tandem mass spectrometry, urinary mercapturic acid (rats), 608
  metabolism and excretion of dinitrobenzenes (rats), 821
  naphthalene epoxidation, stereoselectivity (mice, rats, hamsters), 491
  nephrotoxicity, renal transport processes, 437
Glutathione *S*-transferase
  bioactivation of tetrachloroethylene (rats), 702
  catalyzed conjugations of alkyl halides, stereochemical aspects (rats), 82
  effects of model traumatic injury, hepatic drug metabolism (rats), 749
  hepatic drug metabolism, *N*-substituted imidazole drugs, induction and inhibition (rats), 335
  novel mechanism for conjugation, conversion of melphalan (monkeys), 195
4-(Glutathionyl)phenylalanine, conversion of melphalan (monkeys), 195
Glycine, renal metabolism and excretion, benzoic acid (fish), 665
Glycols, amitriptyline metabolites in human urine, 890
Griseofulvin, pharmacokinetics, blood and skin suction blister fluid (rats), 374

Halogen, fluoro- and fluorochloroethene microsomal metabolism, defluorination, cytochrome P-450 loss (rats), 499
Harmine, harmol and, metabolism, liver microsomes (mice), 74
Hemoglobin, formation, procainamide hydroxylamine, liver microsomes (humans, rats), 37
Hepatocytes
  cryopreservation, xenobiotic metabolism and activation (rats, dogs), 826
  cyclosporin A metabolism (rabbits), 384
  diazepam metabolism (rats, rabbits, dogs, guinea pigs, humans), 312
  effect of diffusional barriers, drug and metabolite kinetics, 51

Hepatotoxicity
acetaminophen-induced, sulfotransferase activity (hamsters), 143
aldehyde dehydrogenases, acrolein oxidation (rats), 356
drug metabolism, effects of model traumatic injury (rats), 749
metabolism of pulegone, 589
2,4,5,2′,4′,5′-Hexachlorobiphenyl, disposition and elimination, two sequential doses (rats), 363
2,5-Hexanedione, dermal dose, disposition, pharmacokinetics (hens), 779
Hippuric acid, renal metabolism and excretion, benzoic acid (fish), 665
Histamine, H_2-receptor antagonist, famotidine, urinary excretion kinetics (rats), 212
HTLV-III, disposition and metabolism, 2′,3′-dideoxycytidine (mice, monkeys), 595
Hydratropic acid, stereoselective metabolism (rats), 529, 535
Hydrazines, *N*-acetylator genotype, extrahepatic expression (hamsters), 68
Hydrocarbons, polycyclic aromatic, cytochrome P-450 in liver microsomes, *in vitro* metabolism, methylxanthines (humans), 237
4-Hydroxyantipyrine, plasma concentration-response relationship, cimetidine inhibition, drug metabolism (rats), 127
N-(2-Hydroxyethyl)retinamide, all-*trans*-retinoic acid and, pharmacokinetics, convenient procedure (mice), 207
5-Hydroxy-2-hexanone, dermal dose of 2,5-hexandione, disposition, pharmacokinetics (hens), 779
trans-4-Hydroxy-2-hexenal, distribution, detection, urinary mercapturic acid (rats), 608
ω-1-Hydroxylauric acids, extraction with ethyl acetate, formation, acetoxy products (rats, fish), 233
4-Hydroxymephenytoin, pharmacogenetic association, new metabolite of *S*-mephenytoin (humans), 277
3-Hydroxymethylantipyrine, plasma concentration-response relationship, cimetidine inhibition, drug metabolism (rats), 127
4-Hydroxypyrazole, oxidation of pyrazole, microsomes (rats), 634
4′-Hydroxy T-2 toxin, isolation and characterization (rats), 816

Ibuprofen
dose-dependent pharmacokinetics (rats), 151
enantioselective glucuronidation (humans, monkeys, rabbits), 767
Imidazole, *N*-substituted, hepatic drug metabolism, induction and inhibition (rats), 335
Iminium ion, phencyclidine metabolite (rabbits), 485
Imipramine, metabolism of, effects, diabetes (mice), 524
Immunoconjugates, LY256787, disposition (rats, monkeys), 640
Interleukin-2, recombinant, plasma concentration profiles (rats), 429
Intestine, *N*-acetylator genotype, extrahepatic expression (hamsters), 68

Jacobine, pyrrolizidine alkaloids, microsomal metabolism (rats), 32

Ketoconazole, disposition and pharmacokinetics (rats), 735
Ketones, amitriptyline metabolites in human urine, 890
Ketorolac tromethamine, pharmacokinetics (monkeys, mice, rats, rabbits, humans), 618
Kidney
metabolism and excretion, benzoic acid (fish), 665
metabolism of acetaminophen (minipigs), 270
metabolism of 2-phenylpropionic acid (rats), 535
microsomal enzymes, naphthalene epoxidation, stereoselectivity (mice, rats, hamsters), 491
microsomal metabolism, SK&F 102,081 (rats), 161
N-acetylator genotype, extrahepatic expression (hamsters), 68
nonenzymatic bioreduction, nitroxyl spin labels (rats), 155
renal transport processes, nephrotoxicity, glutathione conjugate, 437

Lauric acid, extraction of ω-1-hydroxylauric acids, formation, acetoxy products (rats, fish), 233
Leukotrienes
receptor antagonist SK&F 102,081
in vivo metabolism (guinea pigs), 168
microsomal metabolism (rats), 161
Levamisole, dose- and time-dependent effect, elimination of antipyrine (rats), 432
Lidocaine
models for time-dependent behavior, kinetics, isolated perfused liver (rats), 22
steady state kinetics, mechanisms, isolated perfused liver (rats), 17
time-dependent kinetics, mechanisms, liver (rats), 12
Lipid peroxidation
distribution of *trans*-4-hydroxy-2-hexenal, detection, urinary mercapturic acid (rats), 608
pharmacokinetics of pentane, 794
Liver
aldehyde dehydrogenases, acrolein oxidation (rats), 356
clearance, streptozotocin-induced diabetes (rats), 177
cytochrome P-450, isozymes 2 and 5, structure and inducibility (rabbits), 59
cytosol, azo dye metabolites, nuclear translocation (rats), 504
cytosolic and microsomal epoxide hydrolases, induction, 2-ethylhexanoic acid (mice), 114
deacetylation of diltiazem (rats), 122
dehydrogenase form of xanthine oxidase, 1-methylxanthine metabolism (rats), 295
drug metabolism
effects of model traumatic injury (rats), 749
nafimidone, nafimidone alcohol (rats, mice), 571
N-substituted imidazole drugs (rats), 335
effect of diffusional barriers, drug and metabolite kinetics, 51
elimination, series-compartment model, 27
glutathione *S*-transferase-catalyzed conjugations, alkyl halides, stereochemical aspects (rats), 82
isolated perfused
lidocaine kinetics, mechanisms (rats), 12
metabolism, azo dye (rats), 184
models, time-dependent behavior (rats), 22
steady state kinetics, mechanisms (rats), 17
metabolic cleavage of furan ring, 877
metabolism of acetaminophen (minipigs), 270
metabolism of budesonide (rats, mice, humans), 403
metabolism of 2-phenylpropionic acid (rats), 535
N-acetylator genotype, extrahepatic expression (hamsters), 68
β-naphthoflavone-inducible isozyme, cytochrome P-450, chloramphenicol analog (rats), 846
necrosis, acetaminophen-induced, sulfotransferase activity (hamsters), 143
nonenzymatic bioreduction, nitroxyl spin labels (rats), 155
oxidative and conjugative metabolism, effect of cyclosporine (rats), 731
role in mediating toxicity, methyl parathion (mice), 613
selective inactivation by chloramphenicol, phenobarbital-inducible isozyme, cytochrome P-450 (dogs), 852
UDP-glucose and UDP-glucuronic acid synthesis rates, reduced energy state (rats), 281
uptake and metabolism, 2,3,7,8-tetrachlorodibenzo-*p*-dioxin, Ah phenotype (mice), 653
Liver microsomes
4-chlorodiphenyl ether, pharmacokinetics, metabolism (rats), 44
covalent binding to proteins, chlorotrianisene, monooxygenase-mediated (rats), 786
cyclosporin A metabolism (rabbits), 391
cytochrome P-450, polycyclic aromatic hydrocarbons, methylxanthine metabolism (humans), 237
cytochrome P-450 loss, defluorination, fluoro- and fluorochloroethenes (rats), 499
cytochrome P-450 monooxygenases, *in vivo* and *in vitro* metabolism, theobromine (rats), 217
flavin-containing monooxygenase (humans), 256
6-fluoro-2-methylspiro(chroman-4,4′-imidazolidine)-2′,5′-dione, inducer of monooxygenase (rats), 560
formation, procainamide hydroxylamine (humans, rats), 37

metabolism
harmine and harmol (mice), 74
pyrrolizidine alkaloids, *Senecio jaboaea* (rats), 32
metabolism of SK&F 102,081 (rats), 161
NADPH-cytochrome *c* reductase, effects of aging (monkeys), 225
N-oxidation of *N*-methylpyrrolidine (rats), 808
oxidative metabolism, butylated hydroxytoluene (rats, mice), 833
pharmacokinetic interaction, theophylline, chloramphenicol (rats), 204
phenolic metabolite of phencyclidine (rats), 583
species-dependent glucuronidation, UDP-glucuronyltransferases (rabbits, monkeys, humans), 473
tetrahydrocannabinol metabolism (mice), 914
Lorazepam, species-dependent glucuronidation, UDP-glucuronyltransferases (rabbits, monkeys, humans), 473
Lung
cytochrome P-450, isozymes 2 and 5, structure and inducibility (rabbits), 59
microsomes, *see* Microsomes
N-acetylator genotype, extrahepatic expression (hamsters), 68
naphthalene epoxidation, stereoselectivity (mice, rats, hamsters), 491
uptake and disposition, putrescine, spermidine and spermine (rabbits), 189
LY256787, disposition (rats, monkeys), 640

Magnetic resonance imaging, nitroxyl spin labels, nonenzymatic bioreduction, liver and kidney (rats), 155
Mass spectrometry
in vivo metabolism, SK&F 102,081 (guinea pigs), 168
microsomal metabolism, SK&F 102,081 (rats), 161
tetrahydrocannabinol metabolism (mice), 914
thermospray, disposition of 8-methoxypsoralen (rats), 318
Melphalan, conversion to 4-(glutathionyl)phenylalanine (monkeys), 195
Menthofuran, toxicity and metabolism of pulegone, 589
S-Mephenytoin, pharmacogenetic association, formation, 4-hydroxymephenytoin (humans), 277
Mercaptoacetate, bromobenzene metabolism (rats, guinea pigs), 1
Mercapturic acid
glutathione conjugation, 1,2-dibromo-1-phenylethane (rats), 418
tandem mass spectrometric detection, distribution, *trans*-4-hydroxy-2-hexenal (rats), 608
Mercuric chloride, deacetylation of diltiazem, liver (rats), 122
Metabolites, *see also* specific type
pharmacokinetics of, prodrugs, 456
8-Methoxypsoralen, disposition, thermospray mass spectrometry (rats), 318
3-Methylcholanthrene
cytochrome P-450 monooxygenases in liver, *in vivo* and *in vitro* metabolism, theobromine (rats), 217
harmine and harmol, metabolism, liver microsomes (mice), 74
3′-Methyl-*N,N*-dimethyl-4-aminoazobenzene
metabolism, isolated perfused liver (rats), 184
noncovalent binding, nuclear translocation (rats), 504
Methyl parathion, mediation of toxicity, role of liver (mice), 613
4-Methylpyrazole, oxidation of pyrazole, 4-hydroxypyrazole, microsomes (rats), 634
N-Methylpyrrolidine, *N*-oxidation of, cefepime (rats), 808
Methylthio analogs, dihydrodiols, bromobenzene metabolism (rats, guinea pigs), 1
Methylxanthine, *in vitro* metabolism, cytochrome P-450, liver microsomes (humans), 237
1-Methylxanthine, metabolism (rat), 295
Microsomes
amiodarone metabolism (rats, rabbits), 511
hepatic enzyme development, neonates (calves), 676
liver, *see* Liver microsomes
metabolism of 7-ethylbenz[*a*]anthracene (rats), 682
oxidation of pyrazole, 4-hydroxypyrazole, microsomes (rats), 634
pulmonary, oxidative metabolism, butylated hydroxytoluene (rats, mice), 833
renal, naphthalene epoxidation, stereoselectivity (mice, rats, hamsters), 491
Milk, metabolite profile, *N*-2-fluorenylacetamide treatment (rats), 760
Mint oil, toxicity and metabolism of pulegone, 589
Mitochondria, induction of epoxide hydrolases, 2-ethylhexanoic acid, liver (mice), 114
Mitotane, metabolism, perfusion studies, adrenal glands (dogs), 267
Mixed function oxidase
hepatic enzyme development, neonates (calves), 676
monooxygenase-mediated activation, chlorotrianisene, binding to microsomal proteins (rats), 786
Monoclonal antibodies, vinca alkaloid conjugate, disposition (rats, monkeys), 640
Monoethylglycinexylidide, lidocaine kinetics, mechanisms, isolated perfused liver (rats), 12, 17, 22
Monooxygenase
activation of chlorotrianisene, covalent binding, hepatic microsomal proteins (rats), 786
extraction of ω-1-hydroxylauric acids, formation, acetoxy products (rats, fish), 233
flavin-containing
cytochrome P-450, amiodarone metabolism (rats, rabbits), 511
liver microsomes (humans), 256
Trypanosoma cruzi, conversion of *N,N*-dimethylaniline, 200
inducer of, 6-fluoro-2-methylspiro(chroman-4,4′-imidazolidine)- 2′, 5′-dione, liver microsomes (rats), 560
induction, benzo(*a*)pyrene uptake and distribution, 449
mechanism-based inactivation, β-naphthoflavone-inducible isozyme, chloramphenicol analog (rats), 846
metabolism of imipramine, effects, diabetes (mice), 524
NADPH-cytochrome *c* reductase, effects of aging (monkeys), 225
Morphine, intestinal and hepatic conjugation (rats), 710
Muscle, physostigmine, pharmacokinetics (rats), 627

NADPH
conversion of *N,N*-dimethylaniline, cytosolic flavin-containing enzyme, *Trypanosoma cruzi*, 200
cytochrome *c* reductase, effects of aging (monkeys), 225
NADPH-oxidase, deconvolution of P-450 stoichiometry, influence, cytochrome b_5, 344
Nafidimide, pharmacokinetics and metabolism (humans), 773
Nafimidone
nafimidone alcohol and
disposition of (rats), 565
hepatic drug metabolism (rats, mice), 571
Naloxone, intestinal and hepatic conjugation (rats), 710
Naphthalene, stereoselectivity of epoxidation, hepatic and renal microsomal enzymes (mice, rats, hamsters), 491
β-Naphthoflavone, inactivation of inducible isozyme, cytochrome P-450, chloramphenicol analog (rats), 846
β-Naphthylamine, *N*-acetylator genotype, extrahepatic expression (hamsters), 68
Naproxen, enantioselective glucuronidation (humans, monkeys, rabbits), 767
Nephrotoxicity
bioactivation of tetrachloroethylene (rats), 702
cisplatin-induced, gentamicin pharmacokinetics (rats), 329
glutathione conjugate-mediated, renal transport processes, 437
Nitrite, dietary, evidence for diazotization, sulfamethazine (swine), 841
N-(2-*p*-Nitrophenethyl)dichloroacetamide, mechanism-based inactivation, β-naphthoflavone-inducible isozyme, cytochrome P-450 (rats), 846
Nitroxyl spin labels, nonenzymatic bioreduction, liver and kidney (rats), 155
Norantipyrine, plasma concentration-response relationship, cimetidine inhibition, drug metabolism (rats), 127

Nortriptyline, amitriptyline and, phenolic metabolites, bile (rats, rabbits), 882
NSC-308847, pharmacokinetics and metabolism (humans), 773
Nuclear magnetic resonance
carbamate reaction, α-fluoro-β-alanine, 897
human biofluids, direct detection, flucytosine metabolites, 718

Omega hydroxylation, extraction, ω- and ω-1-hydroxylauric acids, ethyl acetate (rats, fish), 233
Omega oxidation
SK&F 102,081
in vivo metabolism (guinea pigs), 168
microsomal metabolism (rats), 161
Optical isomerization, metabolism of 2-phenylpropionic acid (rats), 529, 535
Ouabain, streptozotocin-induced diabetes, alteration, biliary excretory function (rats), 177
Oxamic acid, chloramphenicol metabolism in human volunteer, 925
Oxazepam
metabolic fate (mice), 579
species-dependent glucuronidation, UDP-glucuronyltransferases (rabbits, monkeys, humans), 473

Paraxanthine, biotransformation, polycyclic aromatic hydrocarbons, cytochrome P-450 (humans), 237
Pennyroyal oil, toxicity and metabolism of pulegone, 589
Pentane, pharmacokinetics, 794
Pentopril, orally administered prodrugs, metabolite pharmacokinetics, 456
Perfusion, mitotane metabolism, adrenal glands (dogs), 267
Peroxidases, comparison, chloroperoxidase, cytochrome P-450, 518
Pesticides, methyl parathion, mediation of toxicity, role of liver (mice), 613
Phenacetin, *in vivo* inhibition of oxidation, suicide substrate 1-aminobenzotriazole (rats), 274
Phencyclidine
heterocyclic analogues of, mechanism-based inhibition, cytochrome P-450, 648
iminium ion metabolite (rabbits), 485
phenolic metabolite, liver microsomes (rats), 583
Phenobarbital
cytochrome P-450, isozymes 2 and 5, lung and liver (rabbits), 59
deacetylation of diltiazem, liver (rats), 122
effect of surgery, serum α_1-acid glycoprotein concentration (rats), 138
inactivation by chloramphenicol, isozyme, liver cytochrome P-450 (dogs), 852
in vivo and *in vitro* biotransformation, theobromine, liver (rats), 217
Phenobarbitone, harmine and harmol, metabolism, liver microsomes (mice), 74
Phenol red, streptozotocin-induced diabetes, alteration, biliary excretory function (rats), 177
Phenols
amitriptyline metabolites in human urine, 890
conversion of bromobenzene to 3-bromophenol (rats, guinea pigs), 857
Phenolsulfonphthalein, renal clearance of salicyluric acid (dogs), 695
Phenotypes, Ah, hepatic uptake and metabolism, 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (mice), 653
1-(1-Phenylcyclohexyl)piperidine, heterocyclic analogues of phencyclidine, mechanism-based inhibition, cytochrome P-450, 648
2-Phenylpropionic acid, stereoselective metabolism (rats), 529, 535
Physostigmine, pharmacokinetics (rats), 627
Piperidine
liberation of deuterium from ring, hydroxylation, roxatidine acetate hydrochloride (rats, dogs), 551
nitroxyl spin labels, nonenzymatic bioreduction, liver and kidney (rats), 155
Plasma
concentration profiles, recombinant interleukin-2 (rats), 429
concentration-response relationship, cimetidine inhibition, drug metabolism (rats), 127
N-hydroxymethyl metabolites, 450191-S (dogs), 426
Polyamines, uptake and disposition, lungs (rabbits), 189
Polychlorinated biphenyls, 2,4,5,2′,4′,5′-hexachlorobiphenyl, disposition and elimination (rats), 363
Pregnancy, cyproheptadine and desmethylcyproheptadine, metabolism and disposition (rats), 740
Procainamide ethobromide, streptozotocin-induced diabetes, alteration, biliary excretory function (rats), 177
Procainamide hydroxylamine, formation, liver microsomes (humans, rats), 37
Prodrugs, orally administered, metabolite pharmacokinetics, 456
Profens, enantioselective glucuronidation, 2-arylpropionic acids (humans, monkeys, rabbits), 767
Propranolol, glutathione conjugate formation (guinea pigs, rats), 349
DL-Propranolol, effect of surgery, serum α_1-acid glycoprotein concentration (rats), 138
Prostaglandin H synthase, renal, co-oxidation, 2-bromohydroquinone (rats), 801
Prostaglandins, microsomal metabolism, SK&F 102,081 (rats), 161
(*R*)-(+)-Pulegone, metabolism to a proximate toxin, menthofuran, 589
Putrescine, uptake and disposition, lungs (rabbits), 189
Pyrazole, oxidation to 4-hydroxypyrazole, microsomes (rats), 634
Pyrilamine, tripelennamine and, *N*-debenzylation (rats), 466
Pyrilamine maleate
metabolism of (rats), 460
microbial transformation, potential mammalian metabolites, 97
Pyrrolidine, nitroxyl spin labels, nonenzymatic bioreduction, liver and kidney (rats), 155
Pyrrolizidine alkaloid
distribution of *trans*-4-hydroxy-2-hexenal, detection, urinary mercapturic acid (rats), 608
Senecio jacobaea, microsomal emtabolism (rats), 32

Quinpirole, disposition and biotransformation, antihypertensive agent (mice, rats, dogs, monkeys), 107

Radioimmunoassay, metabolites of cyclosporine, properties (rabbits), 661
Receptors
D-2 dopamine, quinpirole, disposition and biotransformation (mice, rats, dogs, monkeys), 107
histamine H_2, famotidine, urinary excretion kinetics (rats), 212
leukotriene antagonist
SK&F 102,081, *in vivo* metabolism (guinea pigs), 168
SK&F 102,081, microsomal metabolism (rats), 161
all-*trans*-Retinoic acid, *N*-(2-hydroxyethyl)retinamide and, pharmacokinetics, convenient procedure (mice), 207
RLM-3, isolation and characterization, 4′-hydroxy T-2 toxin (rats), 816
Roxatidine acetate hydrochloride, metabolism of (rats, dogs), 551

450191-S, *N*-hydroxymethyl metabolites, plasma (dogs), 426
Salicyluric acid, renal clearance model, interaction with phenolsulfonphthalein (dogs), 695
Senecio jacobaea, senecionine and, pyrrolizidine alkaloids, microsomal metabolism (rats), 32
Sex hormones, acetaminophen sulfotransferase, influence of gonadal hormones (rats), 725
Silver nitrate, deacetylation of diltiazem, liver (rats), 122
SK&F 102,081
in vivo metabolism (guinea pigs), 168
microsomal metabolism (rats), 161
Skin, suction blister fluid, pharmacokinetics, griseofulvin (rats), 374

Sodium sulfate, liver necrosis, acetaminophen-induced, sulfotransferase activity (hamsters), 143
Species differences, disposition of benzo(*a*)pyrene (rats, hamsters, guinea pigs), 442
Spermidine, uptake and disposition, lungs (rabbits), 189
Spermine, uptake and disposition, lungs (rabbits), 189
Stereochemistry
  conjugations of alkyl halides, glutathione *S*-transferase-catalyzed (rats), 82
  enantiometric composition, xenobiotics, criteria, 587
Stoichiometry, influence of cytochrome b_5, deconvolution, P-450, 344
Streptozotocin, induced diabetes, alterations, biliary excretory function (rats), 177
Styrene oxide, effects of model traumatic injury, hepatic drug metabolism (rats), 749
Substrates, "suicide", 1-aminobenzotriazole, phenactin oxidation (rats), 274
Sufentanil, alfentanil and, excretion, biotransformation (rats, dogs), 905
Sulfadimethoxine, species-dependent glucuronidation, UDP-glucuronyltransferases (rabbits, monkeys, humans), 473
Sulfamethazine, evidence for diazotization (swine), 841
Sulfation, adenosine 3′-phosphate 5′-phosphosulfate, concentrations in tissues, different laboratory animals, 133
Sulfotransferase
  acetaminophen, influence of gonadal hormones (rats), 725
  activity, liver necrosis, acetaminophen-induced (hamsters), 143
Surgery, effect, serum α_1-acid glycoprotein concentration (rats), 138

TA-1801
  metabolic cleavage of furan ring, 877
  new hypolipidemic agent, metabolism (rats, rabbits, dogs), 262
Tandem mass spectrometry, detection of urinary mercapturic acid, distribution, *trans*-4-hydroxy-2-hexenal (rats), 608
Tardive dyskinesia, pharmacokinetics, tetrabenazine and its major metabolite (humans, rats), 250
Taurine
  conjugation
    benzoic acid (fish), 581
    3,4-dichlorobenzylacetic acid (rats), 305
Taurocholate, streptozotocin-induced diabetes, alteration, biliary excretory function (rats), 177
Testes, toxicity, metabolism and excretion, dinitrobenzenes (rats), 821
Testosterone, acetaminophen sulfotransferase, influence of gonadal hormones (rats), 725
Tetrabenazine, pharmacokinetics (humans, rats), 250
2,3,7,8-Tetrachlorodibenzo-*p*-dioxin, hepatic uptake and metabolism, relationship, Ah phenotype (mice), 653
Tetrachloroethylene, bioactivation (rats), 702
Tetrahydrocannabinol, metabolism (mice), 914
Theobromine
  biotransformation, polycyclic aromatic hydrocarbons, cytochrome P-450 (humans), 237
  in vivo and *in vitro* biotransformation, cytochrome P-450 monooxygenases, liver (rats), 217
Theophylline
  biotransformation, polycyclic aromatic hydrocarbons, cytochrome P-450 (humans), 237
  chloramphenicol and, pharmacokinetic interaction (rats), 204
Thiols, *in vivo* and *in vitro* theobromine metabolism, cytochrome P-450 monooxygenases, liver (rats), 217
Tixocortol pivalate, major metabolites of, isolation and identification, urine (humans), 868
Trauma, effects of injury, model, hepatic drug metabolism (rats), 749
Trichothecene mycotoxin T-2, isolation and characterization, new metabolite, 4′-hydroxy T-2 toxin (rats), 816
Trifluorochloroethene, microsomal metabolism, defluorination, cytochrome P-450 loss (rats), 499
Tripelennamine, pyrilamine and, *N*-debenzylation (rats), 466
Trypanosoma cruzi, cytosolic flavin-containing enzyme, conversion of *N,N*-dimethylaniline, 200
Tumorigenesis, benzo(*a*)pyrene uptake and distribution, monooxygenase induction (fish), 449

UDP-glucose, hepatic, UDP-glucuronic acid synthesis rates, reduced energy state (rats), 281
UDP-glucuronosyltransferase
  enantioselective glucuronidation, 2-arylpropionic acids (humans, monkeys, rabbits), 767
  hepatic drug metaboilsm, *N*-substituted imidazole drugs, induction and inhibition (rats), 335
UDP-glucuronyl transferase
  hepatic enzyme development, neonates (calves), 676
  species-dependent glucuronidation (rabbits, monkeys, humans), 473
4-Ureidoetodolac, identification (mice, rats, dogs, humans), 921
Urinary metabolites
  busulfan (rats), 399
  disposition of 8-methoxypsoralen, thermospray mass spectrometry (rats), 318
Urine
  excretion kinetics, famotidine (rats), 212
  major metabolites of tixocortol pivalate (humans), 868
  metabolites of amitriptyline, 890

Vancomycin, pharmacokinetics, acetaminophen, antipyrine (swine), 729
Vinca alkaloid, monoclonal antibody conjugate, disposition (rats, monkeys), 640

Xanthine oxidase, dehydrogenase form, 1-methylxanthine metabolism (rats), 295
Xenobiotics
  adenosine 3′-phosphate 5′-phosphosulfate, concentrations in tissues, different laboratory animals, 133
  enantiometric composition of, criteria, 587
  flavin-containing monooxygenase, liver microsomes (humans), 256
  metabolism and activation, cryopreservation, hepatocytes (rats, dogs), 826
  microbial transformation, pyrilamine maleate, 97