

UNDERSTANDING THE DOPAMINE TRANSPORTER CAN LEAD TO NEW THERAPIES FOR NEUROLOGICAL DISORDERS

This book consolidates current information on the dopamine transporter (DAT) in relation to medicinal chemistry and synthesis, biology and pathology, and pharmacology. Because of DAT's role in diseases such as Parkinson's, schizophrenia, attention deficit hyperactivity disorder (ADHD), Tourette syndrome, and drug abuse (in particular, cocaine addiction), DAT research is an exploding field. Tremendous advances have been made toward understanding how it impacts a variety of neurological disease states and disorders.

This reference provides a broad overview of current knowledge that is detailed enough to furnish a basic understanding of the biological, chemical, and pharmacological aspects of DAT in one comprehensive reference. With contributions from eminent scientists who are experts in their particular areas, *Dopamine Transporters: Chemistry, Biology, and Pharmacology*:

- Reviews current studies and research in the areas of DAT function, pathological conditions, cloning, molecular structure, and electrochemical characterization
- Covers findings in the medicinal chemistry of DAT-inhibitory ligands and substrates, discussing the chemical syntheses and summarizing the various structure-activity relationships of important classes of dopamine uptake inhibitors and dopamine releasers
- Has chapters that focus on technologies for future DAT study, including imaging and in vivo and in vitro methods

This is a hands-on reference for researchers, medicinal chemists, pharmacologists, and biologists working with DAT or related proteins and for students in related areas of study.

MARK L. TRUDELL, PHD, is University Research Professor of Chemistry at the University of New Orleans. He has authored over ninety published papers, holds three patents, and has overseen more than \$6 million in research grants.

SARI IZENWASSER, PHD, is Professor in the Department of Psychiatry and Behavioral Sciences at the University of Miami Miller School of Medicine. She is author of three book chapters and over ninety peer-reviewed articles, and has overseen more than \$7 million in research grants.

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